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ABSTRACT

This pack of materials is designed to help students working to improve their basic skills as part of their carpentry and joinery course. An introduction lists relevant core skills units and basic skills standards. The six individual sections of the pack are divided into task sheets and fact sheets. The fact sheets give information and teaching material that are useful for students working toward the units and elements of competence detailed in the corner of worksheets. In some cases, the material focuses on the underpinning knowledge and understanding required for the unit. The task sheets can be used by students to demonstrate that they can perform the activity described in the relevant competence statement or statements, or they give practice in the underpinning knowledge and understanding for those statements. Students should read the fact sheets before undertaking the task sheets. Each main section has a self-assessment questionnaire that should be completed by the student and checked by the course tutor or basic skills specialist. The five sections cover oral communication, reading, writing, communication without words, application of number, and information technology. The material may be used in different teaching situations: open/flexible learning, group learning, distance learning. (YLB)

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ED 362 708

# A Pack to Improve Communication, Numerical and IT Skills for NVQ

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ALBSU
*The Basic Skills Unit*



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# INTRODUCTION

This pack of materials has been produced to help students working to improve their basic skills as part of their carpentry and joinery course. The pack will be useful for students working towards the following qualifications:

- **NVQ Construction (Joinery and Carpentry) Levels 1&2**
- **GNVQ Construction.**

Not all students in the group will need this support. Colleges and course tutors should have undertaken some form of 'screening' of new students in order to identify who needs support in reading, writing and maths. However, a recent survey by ALBSU found that 45% of construction students needed some kind of support in communication skills and a greater number needed help with basic maths. The ALBSU documents, *'Basic Skills in Further Education Colleges'* and *'Basic Skills Support in Colleges: Assessing the Need'* provide further information on screening procedures.

## How the Pack is Structured

The individual sections of the pack are divided into:

- **Task Sheets**

  and

- **Fact Sheets.**

The students should read the Fact Sheets before undertaking the Task Sheets. Each main section has a self-assessment questionnaire that should be completed by the student and checked by the course tutor or basic skills specialist.

The sections on reading and writing include material that will help students with some of the basic skills required in their coursework, notably in using reference systems and the library, note-taking and assignments.

## How to Use this Pack

The material in this pack can be used in different teaching situations:

### Open/flexible learning

The pack can be used by students working independently in workshops. The worksheets can be photocopied, divided into sections and given to students or accessed individually. Some of the tasks in the section on oral communication skills require conversation or discussion with one or more other people: these are probably better used in group situations. The material will be as useful in specialist English, Maths or basic skills workshops as in general College Learning Resource Workshops.

## Group learning

The pack can be used by course tutors in group or class settings. The material is designed to relate to different occupational tasks. It gives specific teaching and practice in the basic skills needed to be able to perform those vocational activities competently. Tutors have used the material in classwork in a variety of ways:

- the material can be worked on by the class together
- individual worksheets can be given to students who have particular difficulty with, for example, note-taking, or measurement in centilitres
- individual worksheets can be given to students to work on at home or the study area, in order to reinforce some basic skill.

## Distance learning

Some of the materials may provide a useful back-up to students on work placements. On site occupational trainers will be able to use individual worksheets as support material. In this situation liaison with a basic skills specialist staff member is essential. For example, the student on placement can be given this work to complete, using information gained during placement. The occupational trainer can check this work and feed comments back to the basic skills support staff.

# The Competence Framework

The material in the pack has been developed so that it relates to:

**NCVQ Core Skills Units:**

- Application of Number
- Communication
- Information Technology

as well as:

**ALBSU Basic Skills Standards:**

- Communication Skills
- Numeracy.

The majority of the Communication worksheets relate to **Levels 1 and 2** of the Core Skills Units and **Foundation and Stage 1** of the Basic Skills Standards.

The majority of the Number/Numeracy worksheets relate to **Level 1** of the Core Skills Units and **Foundation and Stage 1** of the Basic Skills Standards. Again, there are individual exceptions, which are marked.

The worksheets in the Information Technology cover the three Elements at **Level 1**. They are intended as a guide to activities that should be undertaken by students in covering the Units, and provide simplified instruction sheets for exercises.

There is a 'tag' in the corner of worksheets that are relevant to specific units and elements of competence:

| Core Skills |
| --- |
| C:1·2 |

| Basic Skills Standards |
| --- |
| C:9 |

The **Fact Sheets** give information and teaching material that is useful for students working towards the Units and Elements of Competence detailed in the 'tag'. In some cases this material focuses on the underpinning knowledge and understanding required for the Unit. The worksheets that give practice *'Spelling'*, for example, perform this function.

The **Task Sheets** can be used by students to demonstrate that they can perform the activity described in the relevant competence statement or statements, or give practice in the underpinning knowledge and understanding for those statements.

A list of the relevant Core Skills Units and Basic Skills Standards is given below:

**ALBSU Basic Skills Standards**

*Unit 1:* Reading Textual Material
*Unit 2:* Reading Graphical Material for Everyday Purposes
*Unit 3:* Completing Forms and Preformatted Documents
*Unit 4:* Communicating in Writing
*Unit 5:* Conversing with One other Person
*Unit 6:* Reading Textual Material
*Unit 7:* Reading Graphical Material for Everyday Purposes
*Unit 8:* Completing Forms and Preformatted Documents
*Unit 9:* Communicating in Writing
*Unit 10:* Conversing with One other Person
*Unit 11:* Conversing with More than One Person
*Unit 12:* Extracting Information from Audio Visual Material
*Unit 13:* Reading Textual and Graphical Material
*Unit 14:* Using Reference Systems
*Unit 15:* Communicating in Writing
*Unit 16:* Providing, Obtaining and Exchanging Information and Opinions
*Unit 17:* Reading Textual and Graphical Material
*Unit 18:* Using Reference Systems
*Unit 19:* Communicating in Writing
*Unit 20:* Making a Presentation
*Unit 21:* Exchanging Information and Opinions.

**Numeracy Standards**

*Unit 1:* Using Money in Everyday Situations
*Unit 2:* Planning the Use of Money and Time in Everyday Situations
*Unit 3:* Measuring Lengths and Calculating Areas in Everyday Situations
*Unit 4:* Measuring Weights and Volumes in Everyday Situations
*Unit 5:* Setting Timing Devices and Timing Activities in Everyday Situations
*Unit 6:* Giving and Following Directions in Everyday Situations
*Unit 7:* Reporting Numerical and Graphical Information taken from Everyday Situations
*Unit 8:* Using Money in Everyday Situations
*Unit 9:* Selecting Goods and Services in Everyday Situations
*Unit 10:* Planning the Use of Time and Money
*Unit 11:* Measuring Lengths and Calculating Areas in Everyday Situations
*Unit 12:* Measuring Weights and Volumes in Everyday Situations
*Unit 13:* Interpreting and Presenting Numerical and Graphical Information taken from Everyday Situations
*Unit 14:* Using Money in Everyday Situations
*Unit 15:* Selecting Goods and Services in Everyday Situations
*Unit 16:* Planning the Use of Money in Everyday Situations
*Unit 17:* Measuring Lengths and Calculating Areas in Everyday Situations
*Unit 18:* Converting Imperial Units of Length to Metric Units and Vice Versa in Everyday Situations
*Unit 19:* Interpreting and Presenting Numerical and Graphical Information taken from Everyday Situations.

## City and Guilds 3793/3794 (Wordpower and Numberpower)

The basic skills standards have been grouped for the purpose of certification as follows:

**Communication Skills:**

| | |
|---|---|
| Foundation Level: | Units 1 to 5 |
| Stage 1: | Units 6 to 12 |
| Stage 2: | Units 13 to 16 |
| Stage 3: | Units 17 to 21 |

**Numeracy Standards:**

| | |
|---|---|
| Foundation Level: | Units 1 to 6 |
| Stage 1: | Units 7 to 12 |
| Stage 2: | Units 13 to 19 |

## NCVQ Core Skills Units:

### Communication

LEVEL 1:

1.1 Take part in discussions with known individuals on routine matters

1.2 Prepare written materials in pre-set formats

1.3 Use images to illustrate points made in writing and in discussions with known individuals on routine matters

1.4 Read and respond to written material in pre-set formats.

LEVEL 2:

1.1 Take part in discussions with a range of people on routine matters

1.2 Prepare written material on routine matters

2.3 Use images to illustrate points made in writing and in discussions with a range of people on routine matters

2.4 Read and respond to written material and images on routine matters. **(No material for this Element at this level is included in the pack).**

### Application of Number

1.1 Gather and process data using group 1 mathematical techniques

1.2 Represent and tackle problems using group 1 mathematical techniques

1.3 Interpret and present mathematical data using group 1 mathematical techniques.

### Information Technology

1.1 Input data into specified location

1.2 Edit and organise information within individual applications

1.3 Present information in pre-set formats

1.4 Use operating routines which maximise efficiency. **(No material for this Element is included in the Pack).**

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Design: Studio 21

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ORAL

FACT SHEET UPGRADE CONSTRUCTION

# ORAL COMMUNICATION SKILLS

**What is it?**

- it's getting the message across using speech

**Where do you need to use them?**

**At work**

- to boss
- to workmates
- to customers
- on telephone

**At home**

- family
- friends

**At leisure**

- in shops/pubs/disco etc.

**At college**

- to tutors
- students.

**Why might you need these skills?**

- to communicate: ideas
  feelings
  knowledge
- to ask questions
- to gain information
- to respond to questions
- to give information.

**They will help you to:**

- listen carefully and understand what the other person is saying
- respond in turn
- play an equal part in conversation
- avoid being long-winded (be brief, keep to the point)
- use the right sort of language in the right situation (there is a difference between talking to a boss and talking to a mate)
- pay attention to other people's body language and be aware of your own.

| Core Skills |
| --- |
| C:1·1 |

| Basic Skills Standards |
| --- |
| C:10 |
| C:11 |

TASK SHEET UPGRADE CONSTRUCTION

# ORAL COMMUNICATION SKILLS

**Why might you speak about?**

**At work**

- questions about jobs
- about materials/tools
- asking for directions
- procedures for jobs
- wages
- health and safety

**At home**

- food
- family matters
- television programmes
- music/hobbies
- money

**Socially**

- in politics
- music
- hobbies
- sport
- world news.

---

**Ideas for Role Play** – work with a partner – act out the roles

1. A new workmate joins your firm. You have to introduce him/her to the other workers. You need to ask him/her questions about him/herself so that you can tell you mates about him/her.

2. You go with your foreman to meet a client who is having an extension built. Discuss with your foreman how long the job will take, how much pay you will receive, what your hours will be and any other points concerning the work.

Core Skills
C:1·1

Basic Skills Standards
C:10

TASK SHEET UPGRADE CONSTRUCTION

# FOLLOW INSTRUCTIONS

**Your boss tells you how to lift a load in the correct way. Follow his instructions and practise lifting a load.**

**Instructions:**

1. Ask yourself whether one person can manage or is help needed?
2. Wear suitable protection (gloves, helmet).
3. Place feet 450mm apart with one foot slightly forwards in the direction of the movement (to give good balance and a secure base for lifting).
4. Bend knees.
5. Keep back straight.
6. Keep arms as close to the body as you can. Keep elbows in too.
7. Keep your grip firm.
8. Keep the head erect with the chin in.
9. Lift load, straightening the legs without jerking.
10. Lean back slightly to counterbalance the weight of the load before straightening up.

Core Skills
C:1·4

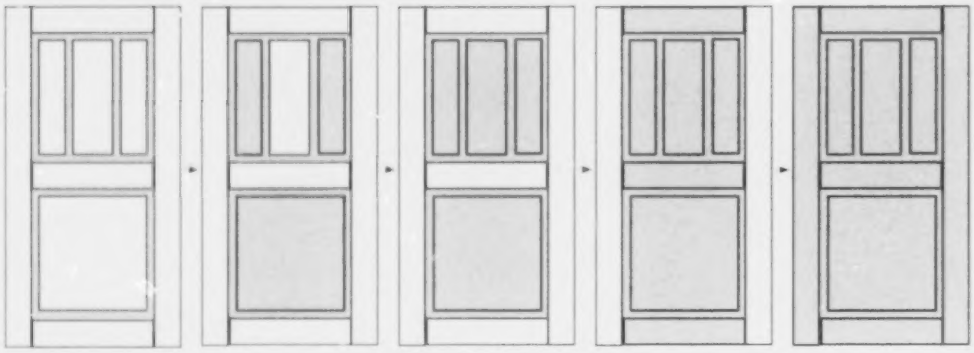
Basic Skills Standards
C:6·2

TASK SHEET UPGRADE CONSTRUCTION

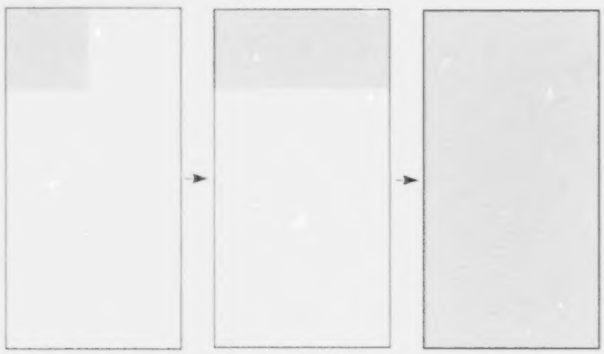
# FOLLOW THE INSTRUCTIONS STAINING & VARNISHING DOORS

(panel doors and flush doors)

## Panel doors



## Flush doors



**Study this diagram, and then:**

a. Describe to a friend how you would stain and varnish the doors.

OR

b. Write down the instructions in point form

**Answer:**

| Core Skills |
|---|
| C:1·1 |
| C:1·4 |

| Basic Skills Standards |
|---|
| C:5·1 |

TASK SHEET UPGRADE CONSTRUCTION

# GIVING INSTRUCTIONS

**Choose one of the following and tell a friend how to . . .**

1. sharpen a chisel
2. set up a mortice gauge
3. make a cross halving joint

**Look at this example first:**

**How to set up a marking gauge (to assist in cutting a halving joint)**

1. Select correct guage
2. Twist thumbscrew to release guide
3. Measure required distance from pin to guide
4. Tighten thumbscrew
5. Re-check measurement

- Plan out what you want to say.
- Be brief but be clear. Give the instructions carefully.
- Give only the necessary information.
- Explain why – it will help to reinforce your instructions.
- Ask your friend if he/she has understood. Ask him/her to repeat the instructions to you to see if there is understanding.

**Answer:**

Core Skills
C:1·1

Basic Skills Standards
C:10·1

**Be Aware of Safety**

FACT SHEET
UPGRADE
CONSTRUCTION

# QUESTIONS

**We ask questions in order to:**

- find out information

  *"which tools do I need for this job?"*

---

- check information

  *"are Thursday and Friday still OK for fitting your new window?"*

---

- find out how other people feel or think about something

  *"are safety helmets comfortable to wear?"*

  *". . . what about dust respirators?"*

  *"do you feel silly wearing all that gear?"*

---

- start and encourage a conversation

  (when someone new joins the firm or College.)

- put someone at ease

  (by asking simple questions about that person eg. where do they work, hobbies, music, likes and dislikes, sports, family etc.)

**Don't be afraid to ask questions. If you have not understood a point ask to have it explained again.**

**Remember if you are unsure of how to operate machinery or of any safety aspect DO ask – your life or someone else's could depend on that knowledge.**

Core Skills
C:1·1

Basic Skills Standards
C:10

TASK SHEET
UPGRADE
CONSTRUCTION

# QUESTIONS

**Asking questions to gain information.**

**You are doing a project at College and need some information about the construction industry from the Health & Safety Executive.**

There are 21 area offices in the South West, South, South East, London North, London South, East Anglia, Northern Home Counties, East Midlands, West Midlands, Wales, Marches, North Midlands, South Yorkshire, West and North Yorkshire, Greater Manchester, Merseyside, North West, North East, Scotland East and Scotland West.

Ask your boss for the address of the nearest one to where you live.

Ask him if he knows where it is.

Ask him if he has been there before.

Ask him how to get there.

Which bus or train to take.

How long it will take you to get there.

Ask for the telephone number. (If it is too far away to visit you may need to write or telephone to obtain the information you require)

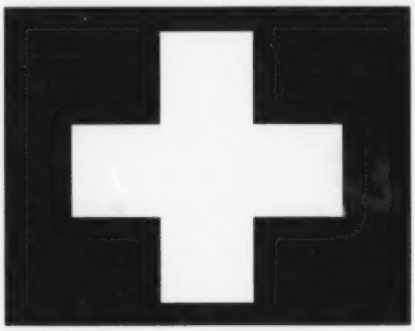
Core Skills
C:1·1

Basic Skills Standards
C:10·2

TASK SHEET UPGRADE CONSTRUCTION

# ASKING QUESTIONS

**Ask your supervisor/tutor for this information:**



| | |
|---|---|
| **The nearest first aid box is situated** | |
| **Person in charge** | |
| **Telephone Number** | |

- **Write in the information on the chart**

| Core Skills |
|---|
| C:1·1 |
| C:1·2 |
| C:1·4 |

| Basic Skills Standards |
|---|
| C:3 |
| C:5·2 |

TASK SHEET UPGRADE CONSTRUCTION

# ASKING QUESTIONS TO GAIN INFORMATION

## Health & Safety

### Ask your supervisor/tutor/workmates the following questions:

**When working in the Construction industry . . . .**

- Why is it necessary to wear a dust respirator?

- Why is it necessary to wear goggles or a face shield?

- Why is it necessary to use barrier creams and wear gloves?

- Why is it necessary to wear earmuffs?

- Why is it necessary to wear head protection when working on site?

- Where and why might it be necessary to wear protective clothing?

Core Skills
C:1·1

Basic Skills Standards
C:10·2

# TALKING & LISTENING

**These are skills we use a lot. How can we improve on them?**

- Do you sometimes feel you've **not got** your **message across**?
- Do you feel someone has **not understood you** (your feelings etc.)?
- Do you feel you have **not understood** what **someone** was **telling** you?

**Remember** There is a different way of talking to family/friends/workmates than you would use when talking to bosses/people working in shops/offices or people you don't know.

This may require a more formal/polite approach and include words like **please, thank you, would you, please may I, I would like, excuse me.**

## Look at these different examples:

| To mates | To a client/in a shop/business |
|---|---|
| gimme . . . | **I would like . . .** |
| pass me the chisel, Jim | **could you pass** me the chisel **please** |
| ta for the nails, Sam | **thank you very much** for the nails, Mr Smith |
| What's up Bill? | **Is there anything the matter**, Sir |
| Hang on, Tim! | **Would you mind** waiting a few minutes, Mr Jones |
| Shut up, you lot! | **Would you mind** being quiet for a moment, **please**, everyone |
| Get lost, Andy | I'm busy at the moment, **would you mind** coming back in a short while |

Now try the task on the next page.

| Core Skills |
|---|
| C:1·1 |

| Basic Skills Standards |
|---|
| C:10·1 |
| C:10·2 |

# TALKING & LISTENING

**Study this conversation heard in the joiners' workshop:**

"Hey up, Bert, I'm in a right old mess, old lad. The missus says I can't work over tonight because of the lasses' night out and I've gotta look after the kids. I'm gonna be a gonner when she finds out I've spent up this month. I'll get some right stick when I get home. I'll have to knuckle down on Thursday instead and earn more bread. See you, Bert."

**Billy has to go and tell the tale to Mr Davis, the boss. He might use different language. Try putting this passage into more formal speech.**

"

"

Suggested speech.

Good morning, Mr Davis; I've got a problem, sir. My wife says I can't work overtime tonight because of the ladies' night out and I have to look after the children. I'm going to be in serious trouble when she finds out I've spent all the money this month. She's going to complain when I get home. I will have to work overtime on Thursday instead to earn more money. Bye, Mr Davis.

Core Skills
C:1·1

Basic Skills Standards
C:10·1

TASK SHEET
UPGRADE
CONSTRUCTION

# REQUESTING INFORMATION

**You are visiting Leeds and decide to call in at the T.R.A.D.A. office to obtain information on timber products, for example, roof trusses, suitability of timber species for specific purposes, fire tests, etc. You're in the centre of Leeds and are not sure of the way to T.R.A.D.A. Stop a passer-by and ask for directions. Give him/her the full address. It is 18 Park Row, Leeds LS1 5JA.**

- Plan here what you would say:

**When you get to T.R.A.D.A. go in and request the information you need.**

- Plan here what you would say:

- **Practise this** or any other situation with a friend to help you gain confidence

Core Skills
C:1·1

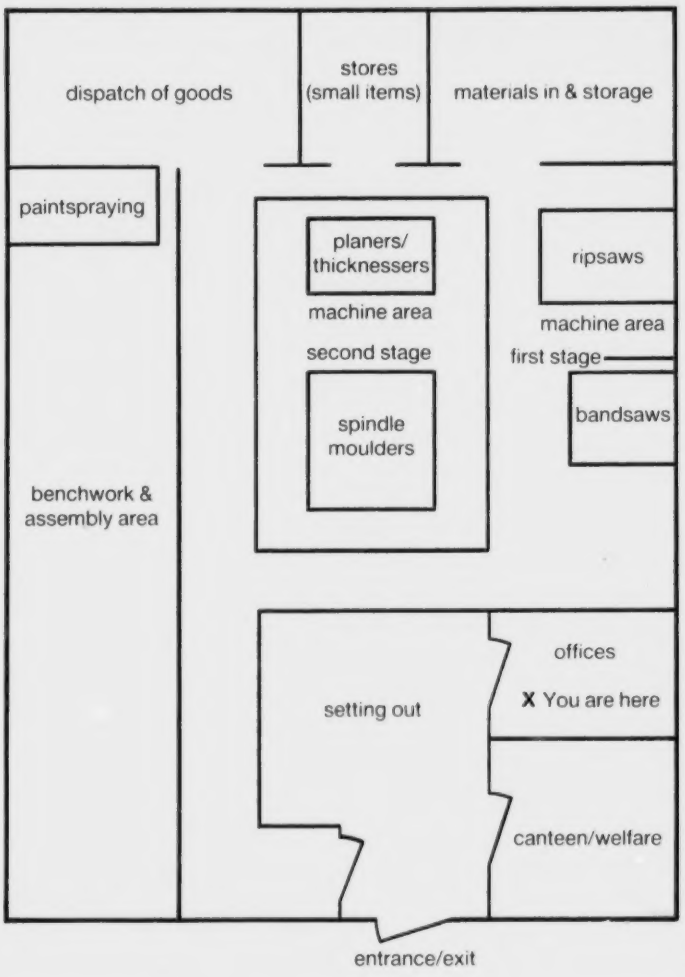
Basic Skills Standards
C:10·2

TASK SHEET UPGRADE CONSTRUCTION

# FINDING THE WAY

**Tell a new workmate how to get from the office to the stores for small items.**

WORKSHOP




**Write down the directions you give to your workmate:**

Core Skills
C:1·1

Basic Skills Standards
C:5·1

TASK SHEET
UPGRADE
CONSTRUCTION

# DISCUSSION

**Work with a friend or in a group and discuss this task.**

You have a client who is unsure as to which timber should be used for window frames. He asks your advice and wants you to recommend a suitable hardwood which is commercially available.

- **discuss** which hardwood would be suitable for the job.

- after discussion **state** the advantages of using **hardwood** rather than **softwood**.

- Use the information in this pack together with manufacturers' catalogues or **discuss** this with your tutor/supervisor.

| Core Skills |
| --- |
| C:1·1 |

| Basic Skills Standards |
| --- |
| C:10·1 |
| C:10·2 |
| C:16·3 |
| C:16·4 |

FACT SHEET
UPGRADE
CONSTRUCTION

# BODY LANGUAGE

When we communicate we use the whole body not just speech. We often reveal our true feelings in the way our body responds to the other person or people.

We may slump in a chair when bored.

We may stand/move further away from someone we don't like/or move closer to someone we do.

We may tap our foot up and down if bored.

We may avoid looking directly at someone (eg. the boss) if we've done something wrong.

We may wave our hands about a lot to get our point over.

We may fold our arms tightly across the chest (or cross our legs tightly if sitting) if we feel unsure of ourselves or are on the defensive.

**These are just some of the signals our body sends out which reveal our true feelings.**

## DO YOU RECOGNISE YOURSELF IN ANY OF THESE?

SO → **By observing the person you are talking to you can tell how they really feel about what you are saying and whether they are interested in what you are saying.**

Remember →

**Communicate confidently.**

**Think – which message am I giving out?**

**Stand or sit upright, walk tall.**

**Look the person in the eye.**

**Watch your hand movements.**

**Have the most suitable expression on your face.**

FACT SHEET UPGRADE CONSTRUCTION

# TELEPHONE SKILLS

**Remember** → to follow these points:

## When answering the telephone at work:

- pick up the receiver, say Good morning/afternoon and name of your firm **(Good morning, Jones Joinery)**
- when taking a message, write it down on the telephone pad and then repeat it again to the caller **(Mr Jones is to meet the site manager Wednesday at 11 am)**
- end the conversation politely **(Thank you for calling, Mr Smith, Goodbye).**

## When making a telephone call yourself:

- plan in advance what you want to say
- have any information necessary on the desk in front of you
- speak clearly and confidently
- give all the relevant details.

| Core Skills |
| --- |
| C:2·1 |

| Basic Skills Standards |
| --- |
| C:10·1 |
| C:10·2 |

FACT SHEET
UPGRADE
CONSTRUCTION

# MAKING A TELEPHONE CALL

- Phone calls are expensive, so **plan** what you are going to say in advance.
- Planning will make you feel more **confident** and you won't get confused and forget what you want to say.

## Look at this example:

- **Dial the number**
- **Give your name and name of firm**
  *(Mick Jones here from Thompsons Joinery)*
- **Ask for person you wish to speak to**
  *(Could I speak to Mr Williams in the packing department please)*
- **When he answers, repeat your name and firm**
  *(Mick Jones here from Thompsons Joinery, Bedford)*
- **Give your reason for calling**
  *(There has been a mistake in the order sent on the 12th March. We're short of 2 doors)*
- **Ask when they can be sent – get a time/date. Repeat this to him**
  *(Wednesday the 19th in the afternoon)*
- **Thank him and say good-bye.**

Remember

**Plan your conversation in advance, include all the relevant details. Speak clearly and loudly enough to be heard. Speak at a suitable speed.**

| Core Skills |
| --- |
| C:2·1 |

| Basic Skills Standards |
| --- |
| C:10·1 |
| C:10·2 |

TASK SHEET UPGRADE CONSTRUCTION

# MAKING A TELEPHONE CALL

## Making New Arrangements

You have to ring a client, Mrs Bradfield. Tell her you will be able to hang the door on Thursday 16th July around 11 am and that you've got the necessary door furniture. Find out if the time is convenient for her. End the conversation politely.

**Plan your conversation carefully and make sure you have included all the details.**

## Making a Complaint

You have to **telephone** Timber Ltd. to make a complaint about a delivery of plywood which was found to be warped on arrival.

**Plan your conversation carefully and make sure you include all the necessary information.**

| Core Skills |
| --- |
| C:2·1 |
| **Basic Skills Standards** |
| C:10·1 |
| C:10·2 |

# TELEPHONE SKILLS

**Chamber of Commerce Training**

**RUGBY LEAGUE FC**
**REQUIRE UNEMPLOYED VOLUNTEERS TO HELP WITH GROUND IMPROVEMENTS**

Do you have experience in:
**Carpentry/Joinery**
**Shuttering/Joinery**
**Bricklaying**
**Concreting**
**Painting & Decorating**
**General Ground Work**
**or just willing pair of hands.**

Main projects include:
**Preparations & installation of floodlights**
**Preparation & installation of a car park**
**Repairs to concrete stands**
**Installation of small corner shed**

Volunteers on the project will receive full benefit plus £10 allowance and full support to find permanent employment

**EMPLOYMENT ACTION • A COMMUNITY CONTRIBUTION**

Help yourself back to work. Help your community. Maintain your work skills and Help the club, call the manager for information on:

**(0942) 78141**

**You have a friend who is an unemployed joiner and a keen rugby supporter. He has seen this advert and asks you to help. You agree to telephone the number and find out more for him.**

- **Plan your conversation before you ring:**
  - say why you are ringing
  - give his name, address and telephone number
  - give details of his experience and what he is interested in doing
  - ask when the starting date is
  - does he need to write in or fill in a form?
  - get the relevant details
  - end the conversation politely.

| Basic Skills Standards |
|---|
| C:6·1 |
| C:10·1 |
| C10·2 |

TASK SHEET UPGRADE CONSTRUCTION

# MAKING A TELEPHONE CALL

**Applying for a Job**

**You've seen this advert in the local paper.**

**Telephone Mrs Hill to find out more details.**

## Experienced Joiner

Required. Must have clean driving licence.

*Please apply to:*

**Mrs A Hill on**

**(0532) 512456**

Hill & Sons Builders Ltd.

**Plan out what you need to say first, including:**

- **name, address, age**
- **work experience**
- **qualifications**
- **clean driving licence**
- **anything else?**

**Make notes here:**

| Core Skills |
|---|
| C:2·1 |

| Basic Skills Standards |
|---|
| C:1·1 |
| C:5·1 |
| C:5·2 |
| C:10·1 |
| C:10·2 |

# SELF-ASSESSMENT QUESTIONNAIRE

## Oral Communications

Please tick a box.

| | Please tick | | | |
|---|---|---|---|---|
| I am able to listen carefully to other people | Yes | | No | |
| I am able to respond in turn | Yes | | No | |
| I am able to ask questions | Yes | | No | |
| I know how to use language to suit the person to whom I am speaking | Yes | | No | |
| I am aware of my own body language and that of others | Yes | | No | |
| I am able to play my part in a discussion | Yes | | No | |
| I feel confident about making and taking a telephone call | Yes | | No | |
| I am able to give clear instructions to others | Yes | | No | |
| I am able to follow instructions | Yes | | No | |

I require further work on .....

.....

.....

.....

**If you have answered NO to any of these questions please read through the section again or ask your tutor for further help.**

CONSTRUCTION
UPGRADE
CONSTRUCTION

# READING

Think back over a typical day and make a note of all the things you've read – (eg. newspaper) **At work, at College, at home.**

**List them:**

**At work**

**At College**

**At home**

**Any others?**

On the bus/in the street/in shops/at the library/in the pub

| Core Skills |
| --- |
| C:1·4 |

| Basic Skills Standards |
| --- |
| C:1 |
| C:2 |
| C:3·1 |
| C:6 |
| C:7 |
| C:8·1 |

FACT SHEET
UPGRADE
CONSTRUCTION

# READING

Look back to the last task and think about what you read in a day. Think about how you read some of the things on your list. Did you glance quickly at the paper before work and then read it more carefully when you got home after work?

There are actually **FOUR WAYS OF READING**

Depending on the reason **WHY** we are reading we may use these different ways, either separately or as a mixture of them.

### 1. Skimming

Look quickly over the text/book to get a general idea of the content. Ask yourself, "What is this book/text about?" Move your eyes **quickly** over the text, looking especially at the **titles**, the **beginning** and **end** (of chapter in a book), and the **first sentence** of every paragraph (where important information is often placed).

### 2. Scanning

Look quickly through the text searching for a particular piece of information or fact. Ask, "Has this text got the information I need, and if so, where is it?" Move your eyes swiftly over the text on the **look-out** for **specific items** (eg. **names, key words or figures**).

### 3. Light reading

Read the text/book/newspaper etc. fairly quickly without concentrating too much on it and without necessarily understanding every single word. This is what we do most of the time.

### 4. Detailed reading

Read more slowly and carefully in order to think about what we are reading so that we understand or can learn and remember (reading instructions, materials for study, documents etc). This is what we do when we are studying or completing an important form.

| Core Skills |
| --- |
| C:1·4 |

| Basic Skills Standards |
| --- |
| C:6 |
| C:13 |
| C:17 |

# READING

## Why are you reading?

**Before you start reading a book, magazine, article or passage ask yourself:**

**WHY am** I reading this?

**WHAT** do I hope to get out of it?

| | |
|---|---|
| Am I reading to get a general ideal of what it's about? | (Use **skimming**) |
| Am I reading to get specific facts? | (Use **scanning**) |
| Am I reading for pleasure/to pass the time? | (Use **light reading**) |
| Am I reading for study purposes/ for understanding? | (Use **detailed reading**) |

- **By answering these 2 questions you have given yourself an idea of how to read.**

FACT SHEET UPGRADE CONSTRUCTION

# FINDING INFORMATION QUICKLY

## Skimming

When researching material or checking information you need to find books or magazines that will give you the right information. You won't have time to read every page of every book or magazine you choose so **you need to skim.**

## What's that?

Think about the way you look through a book or a magazine when you're waiting for someone. What do you do?

- First of all you **pick** out one which **appeals** to you.
- Then you **leaf** through it until you see something **interesting**.
- You may start at the front and **look quickly** at each page until you find something of **interest** which you want to **read** more **carefully**.

**OR**

- You might **turn** straight away to a **particular** page – the letters page, gardeners page or sports page.

**OR**

- You might **look** at the **contents page** for a subject in which you have an **interest**.

**OR**

- If it's a book you might look at the **index** to see if there is a **reference** to the topic in which you are **interested**.

All of these examples involve **skimming**. It is a very **useful technique** which we do all the time without being aware.

Think about the above examples of **skimming** and use them to help you find the right books and magazines and the right information **quickly** and **efficiently**.

| Core Skills |
| --- |
| C:1·4 |

| Basic Skills Standards |
| --- |
| C:6 |
| C:13 |

TASK SHEET
UPGRADE
CONSTRUCTION

# SKIMMING

Aim to get the **general idea.** Look quickly over each passage to get an **idea** of the **content.** Match the number of each passage to a heading at the bottom of the page. You have a choice of five.

1. It is important to note that timber, especially thin machined cladding, is liable to shrink when taken from a warehouse environment to a warmer, drier, home environment. It is essential that any shrinkage occurs before the cladding is fitted indoors since the boards will tend to separate as they shrink, leaving gaps which will spoil the appearance. When you have bought your cladding, remember to store it in the room in which it is to be used for at least 2 weeks in order to allow it to adapt to the natural moisture content of the room. Open all packs, separate the boards, stack them in piles and rearrange the piles every few days so that all the boards are allowed to dry equally.

2. Remove the old door. Do it carefully to avoid damaging the frame. Open the door at 90 degrees to the frame and support it underneath with wedges. Slightly loosen all the the screws which hold the hinges to the frame jambs. Remove the screws holding the bottom hinge first, and then all but one of the top set. Remove this last one only when you are sure you can support the door sufficiently. Being careful not to damage the timber around the hinge housing remove the door and put it aside. If it was a good fit in the frame it can be used as a template if a new door has to be cut.

3. Wood is a material which is used extensively around the home both indoors and outdoors. It is used in the construction of the building, for decorative purposes and also for functional work. Because it is a natural product it has disadvantages: it can be affected by atmospheric changes, expanding and contracting as it absorbs and then loses moisture; it can be damaged by rot and woodworm attack; it can lose its colour; it can become dirty; it can support mould growth and can quickly begin to look unsightly.

| | |
|---|---|
| ☐ Fitting a new door | ☐ Problems of using wood |
| ☐ Storing cladding | ☐ Using preservative |
| ☐ Removing an old door | |

- **See how quickly you can match them up**

TASK SHEET UPGRADE CONSTRUCTION

# SCANNING

**Scan this contents page –** glance quickly down the list to **find the page** for **injuries by occupation.**

| HEALTH & SAFETY STATISTICS | | |
|---|---|---|
| Contents | | |
| Introduction | | |
| Section 1 | The overall picture | 3 |
| Section 2 | Background to the statistics<br>Tables & general notes<br>Lists of tables | 4 |
| Section 3 | Injuries by severity, industry & employment status | 8 |
| Section 4 | Kinds of accident | 23 |
| Section 5 | Nature & site of injuries | 27 |
| Section 6 | Injuries by age & sex | 39 |
| Section 7 | Injuries by occupation | 41 |
| Section 8 | Dangerous occurances | 42 |
| Section 9 | Gas safety statistics | 43 |
| Section 10 | Enforcement action statistics | 44 |
| Section 11 | Occupation health | 52 |
| Section 12 | Definitions & contact points | 74 |

**Answer:**

**Quickly scan down the contents page** to find the correct page as your workmate has burnt himself by spilling a **chemical** onto his hand.

| FIRST AID | | | |
|---|---|---|---|
| First Aid box | 1 | Unconsciousness | 9 |
| Dealing with accidents | 2 | Electric shocks | 11 |
| Resuscitation | 3 | Scalds & burns | 12 |
| Mouth to mouth ventilation | 4 | Simple burns & scalds | 13 |
| Cardiac arrest | 5 | Severe burns | |
| Bleeding | 7 | Chemical burns | 14 |
| Major external | | Electric burns | |
| Internal bleeding | | | |

**Answer:**

- **See how quickly you can get the information**

Core Skills
C:1·4

Basic Skills Standards
C:6
C:7.3

TASK SHEET UPGRADE CONSTRUCTION

# SCANNING

**Look at the table on the following page. Look quickly through the table to find the information required in the question. (Look for key words.)**

1. The most suitable timber for a **dance floor.**

2. The best timber for **sports equipment.**

3. A useful timber for all **internal joinery, whitish** in colour, **supply fair.**

4. Which timber has **irregular bark lines** tending to **brown**?

5. A timber from **South America** and **India** which is **not easy** to work with.

6. A **European** timber famous for its **decorative appearance**.

7. This **African** and **Far Eastern** timber is renowned for its **highly decorative** appearance.

8. A timber used for **mouldings** and **internal joinery** which has a tendency to be **pinkish** in colour.

9. A **European** timber which is **expensive, good to work with,** but has a **large moisture movement.**

10. A **West African** timber used for **curtain walling.**

**Check how long it takes you to do this exercise**

Core Skills
C:1·4

Basic Skills Standards
C:6
C:7·3

# HARDWOOD CLASSIFICATION AND USES OF TIMBER IN BUILDING ACCORDING TO COLOUR

| COLOUR | NAME AND COUNTRY | USES | TEXTURE | DENSITY Kg/M³ | WORKING QUALITIES | MOISTURE MOVEMENT | SUPPLY | PRICE RANGE | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| **WHITISH GROUP** | | | | | | | | | |
| Whitish | Ash<br>Europe | Internal Joinery<br>Sports equipment<br>Body Building | Medium | 689 | Good | Medium | Fair | Medium | Resistant to shock |
| Whitish | Birch<br>Europe, Finland | Flooring<br>Internal Joinery | Fine | 657 | Good | Large | Fair | High | Plywood |
| Whitish | Maple, Rock<br>Canada, U.S.A. | Flooring | Fine | 721 | Medium | Medium | Fair | Medium | Dance Floors |
| Whitish | Sycamore<br>Europe | Internal Joinery<br>Panelling | Fine | 609 | Good | Medium | Fair | Medium | Chopping Boards<br>Draining Boards<br>Scrubs white |
| Yellowish | Ramin<br>Malaya | Internal Joinery<br>Flooring Mouldings | Medium | 657 | Medium | Large | Good | Low/Medium | |
| **YELLOW GROUP** | | | | | | | | | |
| | African Walnut<br>W. Africa | Internal and External Joinery, Cladding<br>Flooring | Medium | 545 | Medium | Small | Good | Medium | Has irregular bark lines tending to brown |
| **VARIEGATED GROUP** | | | | | | | | | |
| | Ebonies<br>Africa , Far East | Mouldings | HIGH DECORATIVE MATERIAL FOR SPECIAL PURPOSES BUT AVAILABLE AS DECORATIVE VENEERS | | | | | | Black streaked with reddish brown markings |
| | Rosewood<br>India, S. America | Internal Joinery | Medium | 849<br>Average | Difficult | Small | Short | High | Purplish brown with irregular markings<br>Decorative veneer |
| | Walnut European<br>Europe | Internal Joinery | Medium | 641 | Medium | Medium | Fairly Good | High | Decorative veneers<br>Shows considerable variation |
| **BROWN GROUP** | | | | | | | | | |
| Light Brown | Abura<br>W. Africa | Internal Joinery<br>Mouldings | Medium<br>Fine | 561 | Medium | Small | Good | Low | Variable in colour with a tendency to be pinkish |
| Light Brown | Afromosia<br>W. Africa | Internal Joinery<br>External Joinery<br>Flooring<br>Curtain Walling | Medium<br>Fine | 689 | Medium | Small | Good | Medium/High | Tends to darken on exposure, will stain with iron under damp conditions |

# LIGHT READING

You glance at this newspaper article before you start work/college.

**TREE PLANTING**

Timber growers were told at a conference yesterday that fewer trees are being planted in Britain than at any time since the Second World War. An environmentalist said that trees were vital in the struggle against global warming. "More tree cover is needed", he told a meeting of the Timber Growers UK. The Timber Industry in Britain had collapsed in 1988 when tax incentives for tree planting were stopped. The Chairman of the Timber Growers UK Ltd. wanted the new government to re-introduce tax incentives for planting trees. There is no shortage of timber at present but the effects of the decline in tree planting would be felt in 20 years when the present crop of trees reach maturity.

- **What's it about?**
- **Does it interest you?**
- **Would you want to read it again more carefully?**

TASK SHEET
UPGRADE
CONSTRUCTION

# DETAILED READING

Try to make sense of this information. The sentences are in the wrong order. Sort them out and write them down in the **correct sequence**.

## Conversion

When the tree has been felled, its branches are removed.

It may also be done when trees need thinning out.

Felling is the act of chopping down a living tree.

This leaves the trunk in the form of a log.

This is where the term 'conversion' comes from.

This part of the tree (the log) is then broken down by being sawn (converted) into timber.

It is done when trees have reached maturity and are of a commercially suitable size.

**Answer:**



Core Skills
C:1·4

Basic Skills Standards
C:6·1

## Safety Check Card

### 1. On Joining the Company

**Have you ...**

- discussed your previous safety training/experience (if any) with your employer?
  *Safety courses attended – certificates.*
- read the company safety policy and had the safety organisation explained?
  *Safety policy explains company's aims and specifies persons with overall responsibility for safety.*
- been shown the safety rules and received instruction in safety procedures?
  *Fire, Accidents/First Aid, Transport/Plant, Electricity.*
- been given the name and location of the Safety Adviser?
  *Additional details will be given on site.*
- been informed of the need to use protective clothing and equipment?
  *Operations for which protective clothing and equipment is required.*
- been told of your personal responsibilities for health and safety?
  *Safety awareness – Safe methods of work.*
- had explained the authorisation necessary for the use of plant, machinery, powered hand tools?
  *Use of these items restricted to trained persons only.*
- been told the need to report 'near misses' and defective plant and equipment?
  *Your action may prevent future accidents or dangerous incidents.*
- been told of the company's procedure for dealing with grievances and disputes affecting health, safety and welfare?
  *Consult with Supervisor or Safety Representative.*
- been told or shown where notices relating to safety matters are displayed?
  *Safety information diplayed on noticeboard, Safety Bulletins.*

**CITB** **... if not, ASK**

### 2. For Employees on Site

**Do you know ...**

- the hazard areas where risk of injury exists?
  *Fragile roofs, excavations, electricity, etc.*
- the location of first aid and the person in charge?
  *Your nearest first aid box. Name of trained first aider.*
- when and where safety helmets must be worn?
  *The need to wear avoiding head injury.*
- what to do in the event of a fire?
  *Means of raising alarm – where the fire extinguishers are, how you operate them. Location of the fire assembly point.*
- what to do if you have an accident?
  *Obtain first aid treatment. Report it, ensure entry into Accident Book.*
- what type of protective clothing and equipment is required or available and how to obtain it?
  *How to use and look after it. Where it is issued.*
- your responsibility towards good housekeeping?
  *Site tidiness, disposal of materials.*
- what type of plant and equipment you are not permitted to use?
  *All items upon which restriction of use is placed. Examples: dumpers, fork lifts, woodworking machines.*
- the instructions regarding the use of scaffolding and other means of access?
  *Scaffolding – necessity for guard rails, toeboards, non-removal of ties, use of brick guards. Ladders – serviceability, security, safe use. Mobile towers and their use.*
- your responsibility to report defective plant and equipment, unsafe practices and methods of work?
  *Serviceability of plant/equipment, and safe systems of work help prevent accidents.*
- the location of all welfare facilities?
  *Canteen, washroom and toilets, drying room.*

**... if in doubt, ASK YOUR SUPERVISOR**

- **Read carefully through the cards – made sure you have followed and understood all the points IF NOT ... ASK**

**It is important that you have read and understood this information**

TASK SHEET UPGRADE CONSTRUCTION

# DETAILED READING

**Read the passage carefully and complete the instructions which follow in point form.**

### LADDERS

It is extremely dangerous to use any ladders which have rungs which are split, missing or loose so check for damage first. When positioning a ladder it is necessary to place it at the right angle (approximately 75 degrees from horizontal) in the correct position and to make sure it cannot slip. Always have someone at the foot when securing the top of the ladder. While working from a ladder it is dangerous to lean over too far to one side. It is safer to come down from the ladder and move it into a better position. It is dangerous to have more than one person on a ladder at a time.

- ⊘ Do not use ladders
- ✓ Check for
- ✓ the ladder
- ✓ Make sure
- ✓ Always have someone at the foot
- ⊘ While working from a ladder do not
- ✓ Come down from the ladder and
- ⊘ Do not have more than one

| Core Skills |
| --- |
| C:1·4 |

| Basic Skills Standards |
| --- |
| C:6·1 |
| C:6·2 |

# DETAILED READING

## Read the following newspaper article and then fill in the chart with the necessary information.

Up to 250 construction workers may have been saved from head injuries by wearing a hard hat in the first year of the Construction (Head Protection) Regulation 1989.

Provisional Health & Safety Executive statistics show there were 28 deaths from head injuries in 1990/91 compared to 42 in 1989/90.

Major head injuries also fell from 201 in 1989/90 to 142 in 1990/91.

The Chairman of the Health & Safety Commission said the figures were very encouraging. "Hard hats are cheap and effective – they save lives and prevent fractures and severe lacerations of the skull. Wear your hard hat – it could save your life."

A construction worker told how his life had been saved when wearing a hard hat after a bracing tube fell 12 floors and struck him on the head. he suffered a jarred neck and a cut to the forehead but fortunately escaped serious injury.

The Construction (Head Protection) Regulations 1989 require all workers to wear safety helmets wherever there is a risk of injury.

## Fill in the correct information

| | |
|---|---|
| Number saved from head injuries by wearing hard hats in 1989/90 | |
| Deaths from head injuries in 1990/91 | |
| Deaths from head injuries in 1989/90 | |
| Major head injuries in 1990/91 | |
| Major head injuries in 1989/90 | |
| Hard hats are _____ and effective. | |
| Wear a hard hat it could _____ your _____. | |
| The Construction (_____ _____) Regulations 1989 require all workers to wear _____ _____ wherever there is risk of _____. | |

Core Skills
C:1·4

Basic Skills Standards
C:6·1

TASK SHEET UPGRADE CONSTRUCTION

# DETAILED READING

**Study this advert and answer the following questions:**

## Suppliers to the trade of top quality Timber

We offer a quick efficient service
to save you money and time

*Free Local Delivery*

Stockists of: plywood, blockboard, MDF, chipboard, hardboard, sawn carcassing, joinery redwood, machined redwood, door blanks, doors, hardwoods, specialist softwoods including parana pine, hemlock and yellow pine

All types of sheet materials

*Ring or call in NOW*

**Walker & Wood**
**(Timber Merchants) Ltd.**
**Tel: Liverpool 051 3586150**

1 Do you pay for delivery? .....

2 Will they deliver free to London? .....

3 Of what quality is their timber? .....

4 Do they supply to the public? .....

5 Name 3 types of board stocked .....

6 Name 3 softwood in stock .....

7 Name 2 types of redwood .....

8 Describe the carcassing .....

9 What types of sheet material are in stock? .....

10 Do they only stock softwoods? .....

Core Skills
C:1·4

Basic Skills Standards
C:6·1

# DETAILED READING

**Read the following passage carefully and answer the questions.**

Wood is a material that is very widely used in a variety of ways. It is fortunate for the human race that new growth replaces what is used although not always as quickly as we use it. Nature sometimes takes a wood out of use as in the case of Dutch Elm Disease. Today timber is easily transported to all corners of the earth and so the variety is much greater. This can pose problems with the newer woods as to their characteristics and suitability. This problem is made worse by the use of common names eg. 'Brazilian mahogany' which can be used to cover a group rather than refer to one type. There are thousands of different varieties of trees each having a botanical name. These names are vital if a certain wood is needed but the ordinary timberman is unlikely to be familiar with them. He will, however, have enough knowledge about a wood to inform you of its characteristics and suitability.

1 Is wood a popular constructional material?

2 Are supplies generally good?

3 Give one example of nature taking a wood out of use.

4 Why do you think it is much easier to transport timber today?

5 Why does the increased variety of wood present problems?

6 What can a common name describe?

7 Why might it be important to know the botanical name?

8 How can the timberman help the joiner and carpenter to choose suitable woods?

9 Do you know which ways he might use to identify woods?

10 Can you explain what these words mean?
Use a dictionary to check their meanings.

characteristics ..... material .....

suitability ..... botanical name .....

Core Skills
C:1·4

Basic Skills Standards
C:6·1

TASK SHEET UPGRADE CONSTRUCTION

# SUMMARISING OR GETTING THE MAIN IDEA

## Read the following passage:

**Accidents in the Construction Industry**

Every accident at work has to be reported and details recorded in the Accident book. Any accident must be reported to a person in authority such as the site agent or foreman who will make sure that it is officially reported as the law demands.

If an accident is not reported the injured person may have no evidence to support a compensation claim.

The details and facts learnt from the reporting of accidents can be very useful in improving safety at work.

- Can you tell someone what should happen if an accident occurs at work?
- Why is it important to record details?

## Answer:

Core Skills
C:1·4

Basic Skills Standards
C:6·1

# SUMMARISING

## Softwoods and Hardwoods

Trees can be generally divided into hardwoods and softwoods. This is not always a true definition of relative hardness as a few softwoods are actually harder than some hardwoods. Most softwoods are from coniferous trees with needle leaves which they keep during the winter. Hardwoods have broad leaves which are usually shed in winter in the more severe climates. Generally speaking, softwood trees come from the colder areas of the world, while many hardwoods grow in the tropics. Softwoods grow quickly and mature in 20-50 years, whereas hardwoods are slow growing and may take hundreds of years to reach a suitable height for conversion to timber. The relative density of hardwoods is much greater than that of softwoods, for example – some hardwoods are so dense that they would not float in water making them unsuitable for a purpose such as boat building. The terms 'softwood' and 'hardwood' mainly refer to important botanical differences in cell structure and composition.

Look at this summary of points under the heading **Softwoods.** Can you write down the main points under the heading **Hardwoods.**

| **Softwoods** | **Hardwoods** |
|---|---|
| Needle leaves | |
| From coniferous trees so keep leaves in winter | |
| Grow in colder areas of world | |
| Grow quickly | |
| Mature in 20-50 years | |
| Not as dense | |

Important differences in cell structure and composition

Broad leaves, shed leaves during winter in cold climates, many grow in tropics, grow slowly, mature in hundreds of years, greater density

Core Skills
C:1·4

Basic Skills Standards
C:6·1

TASK SHEET UPGRADE CONSTRUCTION

# MAKING NOTES FROM A PASSAGE

**If a workmate has just had an accident you should follow these instructions:**

- remove the hazard if it is safe to do so
- call for help (someone with first-aid training)
- call an ambulance if necessary

**But**

- do not move the injured person unless there is immediate danger
- stay with the injured person and give comfort
- make as comfortable as possible
- do not give anything to eat or drink
- do not allow the injured person to smoke.

Read through the instructions.

Check through and make sure you understand and are able to act in an emergency.

Sort the information into the right column.

| Do | Don't |
|---|---|
| ✓ | |
| ✓ | |
| ✓ | |
| ✓ | |
| ✓ | |

| Basic Skills Standards |
|---|
| C:6·1 |
| C:6·2 |

# MAKING NOTES FROM A PASSAGE

**Hand Protection**

Skin complaints are a problem in the construction industry and are the reason for many lost days of work. Rough or sharp objects can cause injury as can contact with substances like cement and can lead to skin disease. The most common one is dermatitis.

The area most vulnerable (both to injury and to infection and disease) is the hand. Suitable protection should be used for example, gloves, barrier creams and frequent washing with soap and water. Help to reduce the risk of cuts, grazes and puncture wounds by the correct use of gloves. There are differing types of glove which provide protection against heat, water, chemicals, materials handling, for example.

## Make brief notes:

What can cause injury to skin? .....

Most common skin disease? .....

Most vulnerable area? .....

Protection available

1. .....
2. .....
3. .....

Gloves help to reduce risks of

1. .....
2. .....
3. .....

Use correct gloves for protection against

1. .....
2. .....
3. .....
4. .....

TASK SHEET UPGRADE CONSTRUCTION

# DOES YOUR COLLEGE LIBRARY HAVE?

| | | Please tick | |
|---|---|---|---|
| a. | Author's catalogue | ☐ | What form? |
| b. | Bibliography service | ☐ | Who to ask? |
| c. | Books in foreign languages | ☐ | Which languages? |
| d. | Computerized lending service | ☐ | How to use it? |
| e. | Daily newspapers | ☐ | Which ones? |
| f. | Exhibition area | ☐ | Where is it? What kinds? |
| g. | Inter-library loan service | ☐ | Local or nationwide? |
| h. | Helpful librarians and staff | ☐ | Any special skills? |
| i. | Photocopying machine | ☐ | Black/white or colour? Cost? |
| j. | Reading room | ☐ | Where? Size? |
| k. | Reference only section | ☐ | What subject variety? |
| l. | Music/record lending service | ☐ | Cost? Conditions of loan? |
| m. | Translation service | ☐ | Which languages? |
| n. | Local information service | ☐ | Who is it run by? |
| o. | Any subject catalogues | ☐ | What form? |
| p. | Magazine/periodicals section | ☐ | Reference or borrowing? |

**Use these questions to find out exactly what your library has to offer and then try to make use of the facilities**

FACT SHEET UPGRADE CONSTRUCTION

# FINDING YOUR WAY AROUND A LIBRARY

For your course you will probably need to use the library. Librarians will be there to help you but you can save time if you can find your own way around a library and find the resources you need quickly and efficiently.

**NON-FICTION** books are usually arranged in a numerical order called the **DEWEY DECIMAL CLASSIFICATION** system, which divides all books into **10 main classes:**

| | |
|---|---|
| 000–099.9 | General works (eg bibliographies, journalism) |
| 100–199.9 | Philosophy (eg psychology, logic) |
| 200–299.9 | Religion (eg the Koran, Christianity) |
| 300–399.9 | Social sciences (eg politics, economics, law) |
| 400–499.9 | Languages (eg French, German) |
| 500–599.9 | Science (eg maths, physics, chemistry, biology) |
| 600–699.9 | Technology (eg engineering, farming, commerce) |
| 700–799.9 | Arts and recreation (eg music, sport) |
| 800–899.9 | Literature (eg poetry, drama) |
| 900–999.9 | History and geography (eg Middle Ages, Europe, Africa) |

The Dewey Classification number is shown at the end of each shelf and is written at the bottom of the spine of each book.

**Which class would you need to look at for your course?**

You would need the **Technology** class **600–699.9**

Each **main class** is divided into **ten** subject units which will enable you to find the **section** you need.

**THE UNITS WITHIN THE TECHNOLOGY CLASS 600-699 are:**

| | |
|---|---|
| 600–609 | General applied science |
| 610–619 | Medicinal sciences |
| 620–629 | Engineering |
| 630–639 | Agriculture |
| 640–649 | Domestic science |
| 650–659 | Commerce |
| 660–669 | Chemical technology |
| 670–679 | Manufacturers |
| 680–689 | Miscellaneous manufacturers |
| 690–699 | Building construction |

**Which numbers will you need to look for?**

Basic Skills Standards
C:14·1

# LOOKING AT A REFERENCE CARD

HILTON FRANK
CRAFT TECHNOLOGY FOR CARPENTERS AND JOINERS
LONGMAN (Softback)
LONDON
1968 (first published)
1970 (reprinted)
SHELF 694
ISBN 0582 42526 3
242pp 20/- (£1) Index ✓ Bibliog ×

**Study this reference card and see if you can identify all the information below:**

1. Author's surname and first name or initials
2. Full title
3. Publisher
4. Type of edition (hardback/softback)
5. Dates of publication
6. Length (no. of pages)
7. Is there an index and/or a bibliography
8. Dewey Decimal Classification number
9. International Standard Book Number
10. Price.

**Puzzle**

Imagine you have to put back books on the shelves of the College library. You have to put them back one at a time. Books are different thicknesses of 10, 20, 30mm. How many books can you fit on the first empty shelf?

One, after that the shelf isn't empty

TASK SHEET UPGRADE CONSTRUCTION

# FINDING YOUR WAY AROUND THE LIBRARY

**Answer the following questions –** use the card index, microfiche or take your query to the librarian.

**Using the library –**

1. When converting timber what does the term **'cut through and through'** mean?
2. What types of **cells** are found in the cell structure of a softwood?
3. Name 12 **softwoods.**
4. How would you send for trade literature on **plywoods** using only the library and the postal system?
5. Where would you look up information provided by trade literature on the subject of **windows**?
6. Find the BS number for **stormproof windows.**
7. Find the **Health and Safety at Work Act**
   a) for **loan** (give shelf number)
   b) for **reference** (give shelf number)
   N.B. Use card index
8. Find if '**Carpentry and Joinery** by Peter Brett 1 and 2' are available at the public library nearest your home. (Use the microfiche).
9. Find a book on **wood turning** using the subject index.
   Give the **Title, Author** and **Shelf Number.**
10. Give the **O.S.** (Ordnance Survey) **grid reference** for your college/or place of work or your home.
11. Find the '**Stanley Hand Tools Catalogue**'. What is in Section 9, pages 6 & 7?
12. Sketch a vertical section through a **storm-proof window.**
13. What is the '**Building Products Index**'**?**
14. What does No. (30) 2 contain in the '**Building Products Index**'**?**
15. Find the **BS** number for **Construction Drawing.**
16. Which books are available on **Construction Drawing?**
    Make a list giving the **author** and **publisher.**
17. What is shown on the **Contents** page of the book – '**Industrial Studies for Building Craft Students** by R C Boucher'?
18. Find out how many and which books there are available on the subject of **Woodworking Machinery.**
19. What is the **rise** of a **private stair case?** Use the Buildings Regulations.
20. What does **TRADA** stand for?

**Ask the librarian if you need help**

FACT SHEET UPGRADE CONSTRUCTION

# FINDING OUT INFORMATION

## You don't always need to go to the library for information.

Sometimes it isn't always necessary or practical to get **information** from a **library.** If you are working and have little free time you may find it more convenient to buy **magazines** at your local **newsagent.** Material, such as **newsletters, samples** and **catalogues** are often sent **free** to your **firm,** so you could always ask your boss to let you have a look at anything which is relevant to your studies at college. Another good source of information is **trade literature.** Many firms are only too pleased to send out information on their products and **catalogues** are usually well-illustrated and make very interesting reading.

You can buy **magazines** at your local **newsagent.** For example:

- **Woodworker**
- **Practical Woodworker**
- **Traditional Woodworker**
- **Woodworking**
- **Fine Woodworking (American)**
- **Practical Do-It-Yourself**
- **New Builder**
- **Building**
- **Building Trades Journal** (to order).

These will be sent to your **firm:**

- **Woodworking News**
- **Wood & Equipment News**
- **Woodwork in Industry News.**

A great deal of **information** can be obtained for projects or assignments by sending off for **trade literature.** For example:

- Door furniture, concealed door closers, hinges, security lock, overhead door closers, door systems, knobs and knockers etc.
- Hand tools, machinery.
- Safety footwear, insulated fire resistant panels, roofing systems, roof and wall linings for industrial buildings, complete range of DIY and home improvement products etc.

| Basic Skills Standards |
| --- |
| C:6·1 |
| C:13 |

TASK SHEET UPGRADE CONSTRUCTION

# USING BOOKS

Books have certain **technical terms.** You need to be familiar with them in order to use books properly. Look at the task below and see if you can give each term its correct meaning. Number 3 has been done for you.

| Technical Terms | Meaning |
|---|---|
| 1 Index | a An alphabetical list of topics in a book with page numbers for each |
| 2 Bibliography | b A list of other books on the same subject |
| 3 Reference | c An introduction explaining the title and content |
| 4 Preface | d A list of chapter headings and their page numbers |
| 5 Contents Page | e When the author makes reference to another author or book |

**If you are not sure then look at the next page**

Basic Skills Standards

C:13

C:17

FACT SHEET UPGRADE CONSTRUCTION

# USING TEXT BOOKS OR REFERENCE BOOKS EFFECTIVELY

You may have to use **text books** as part of your course or your tutor may send you to the library to **research information**. In both cases you need to familiarise yourself with the **layout** of **books**.

Most **text books** are made up of the following different sections:

1. **The Preface** (called introduction or foreword)
   This will probably be the first piece of writing after the title page. Written by the author it usually states:

   a. The purpose of the book.
   b. The type of student (eg. Carpenters & Joiners) and the level of student (eg. NVQ level 2) it is aimed at.

2. **The Contents page**
   Always placed at the front of book after the preface.

   It lists the contents of the book in **page order**.

   The list is usually divided into **sections/chapter headings** (usually printed in **bold** type) and after each heading is a detailed list of what is in each chapter.

   This is very useful as it can show you how a topic is developed chapter by chapter.

3. **The main part of the book**
   This is made up of the subject information.

4. **The Index**
   This is placed at the **back** of the book. It lists the contents of the book in **alphabetical order**.

| Basic Skills Standards |
| --- |
| C:13 |
| C:17 |

TASK SHEET UPGRADE CONSTRUCTION

# USING THE CONTENTS PAGE

**Study this contents page and find the right ones for you – carpenter and joiner, bench joiner and woodworking machines.**

## Contents


**Page**

1 Craft & Operative Careers in Construction – An Introduction
2 What is the Construction Industry?
3 Personal qualities

**Occupational information for:**

4 Bench joinery
5 Bricklayer
6 Built-up Felt Roofer
7 Carpentry & Joinery
8 Ceiling fixer
9 Demolition operative
10 Demountable partition erector
11 Dry lining operative
12 Fencer
13 Floor layer
14 Formworker
15 General construction operative
16 Glazier
17 Mastic ashphalter
18 Painter & Decorator
19 Plant Mechanic
20 Plant Operator
21 Plasterer
22 Plumber
23 Roof sheeter & cladder
24 Roof slater & tiler
25 Scaffolder
26 Shopfitter
27 Steeplejack
28 Stonemason
29 Wall & Floor tiler
30 Woodworking machinist
31 Health & Safety Information


**Answers**

FACT SHEET UPGRADE CONSTRUCTION

# FINDING YOUR WAY AROUND BOOKS

## Using text books or reference books

If you are researching a topic and find many books on the subject, first of all **assess whether the book will be of any use to you**.

## How will you do this?

| | |
|---|---|
| 1. Read the **Preface** | It will tell you if the book is aimed at the right level of study for you and will also tell you what the author has **covered** in the book. |
| 2. Look at the **Contents Page** | Carefully read the chapter **headings** so that you will have a good idea of all the areas covered in that particular book. |
| 3. Look at the **Index** | Turn to the back of the book to the **Index**. Find a subject or name of a person you are familiar with and look it up. You will be given page references – just choose one, then look it up and see what the author says about it. Doing this will let you see how the author writes and you will then be able to make a decision as to whether it is easy to read and understand. If not, then try the same method with another book. |

Remember ➤ If you want to know what sort of things the book tells you about … look at the **contents page**

If you want to find a specific piece of information use the **index**

| Basic Skills Standards |
|---|
| C:13 |
| C:17 |

TASK SHEET UPGRADE CONSTRUCTION

# USING THE CONTENTS PAGE

**Study this page and find the chapters you would need for information on:**

1. planes
2. softwoods
3. mortice and tenon joint
4. drills
5. roof trusses
6. nails
7. the hollow chisel mortiser
8. screws

**Contents**


1 Timber and associated materials
2 Hand tools and workshop procedures
3 Portable powered hand tools
4 Types of woodworking machines
5 Basic woodworking joints
6 Suspended timber ground floors
7 Gable ended single roofs
8 Formwork
9 Door construction
10 Window construction
11 Moisture movement
12 Fixing devices


**Answers:**

TASK SHEET UPGRADE CONSTRUCTION

# REFERENCE BOOKS

They are books of information – they are there for you to dip into to find the necessary piece of information.

They are:

- Encyclopaedias
- Dictionaries
- Telephone books
- Yellow pages
- Catalogues
- Guidebooks
- Manuals

Any more you can think of?

.....

.....

.....

.....

Most libraries have a reference section where you can browse.

Here are some examples:

- **The British Coal Rugby League Yearbook**
- **The Penguin Dictionary of Modern Quotations**
- **The Complete Book of Home Decorating**
- **A History of England**
- **AA Motorists' Handbook**
- **The Manual of Family Health**
- **Atlas**
- **The Bikers' Handbook**
- **Roget's Thesaurus**

**Do you use reference books Which?**

.....

.....

.....

.....

.....

.....

.....

.....

Basic Skills Standards

C:6·3

C:13

# USING YELLOW PAGES

## Study the following section of timber merchants

◆ Timber merchants

| | |
|---|---|
| A & C Timber New/Reclaimed Timber | Halifax (0422) 441258 |
| Barwick (Timber) Ltd. Roof Trusses, Carcassing, Joinery | Leeds (0532) 611335 |
| Calvert Timber Ltd. Timber & Sheet Materials | Leeds (0532) 613829 |
| Dale & Morgan Quality Softwood & Hardwood Trade & Retail | Leeds (0532) 683581 |
| Edward's Timber Ltd. Timber Specialists, Plywood, Chipboard, Carcassing, T&G PSE | Wakefield (0924) 363177 |
| England's Timber Dried UK & European Hardwoods & Flooring | Dewsbury (0924) 358625 |
| Fowler & Dickinson (Timber Merchants) Ltd. | Dewsbury (0924) 358616 |
| Harrison & Smith (Timber) Ltd. | Castleford (0977) 447755 |
| Hawes Timber (Leeds) Ltd. | Leeds (0532) 340452 |
| Hawes Timber Sheet Materials Ltd. | Leeds (0532) 231112 |

- Find a timber merchant who will supply you with European Hardwood. Give his name and phone number including the code for the town.

- Find a timber merchant who will supply softwoods to the trade.

- Find a timber merchant who will supply you with carcassing.

- Which companies would supply you with plywoods?

FACT SHEET UPGRADE CONSTRUCTION

# USING AN INDEX

This can sometimes be quite difficult – if you can't find what you are looking for or if you are not sure **where** to look!

Remember

An Index lists the contents of the book in **Alphabetical order** and gives the page numbers you need.

## Look at this example of part of an index:


| | |
|---|---|
| damp proof course | 182-4 |
| dead knots | 20-3 |
| deciduous trees | 6 |
| degraded timber | 24-6 |
| dimension saw | 140-1 |
| disc sander | 159 |
| doors | 130-1 |
| double roof | 210 |
| double tenon | 171 |
| dovetail: | |
| halving | 178 |
| joint | 185-8 |
| lapped | 185 |
| nailing | 247 |
| proportions | 185 |
| saw | 58-9 |
| template | 49, 176 |
| dowel, bit | 78, 79 |
| dowel, cradle | 12 |
| dowel, joints | 172,174 |


- List the pages where you could find information on a dovetail joint
- How many pages give information on degraded timber?
- Which pages refer to a dovetail template?

## Why is it useful to have an index?

- you can save a great deal of time when looking for information
- you can quickly see whether a book has the information you require
- you can build up a list of books which have the information you require.

Basic Skills Standards

C:6·3

C:13·1

TASK SHEET UPGRADE CONSTRUCTION

# FINDING INFORMATION FROM TEXT BOOKS

**Using any standard craft technology book for carpenters and joiners try to find out the following:**

1. Study the contents page and find a chapter on **Plywood and Manufactured Boards.**
   Scan through the sub headings until you come to **Adhesives for Wood**.
   Find out what **PVA** stands for.

2. Study the **Index** – find **Timber**.
   Find the full name of **TRADA** and mention one test carried out by this organisation.

3. Find a chapter on **Timber preservation**.
   Look under **dry rot** and find the name of the **fungus** which is responsible for most of the destruction of timber buildings.

4. Find a chapter on **Timber seasoning**.
   Find the section on **Air seasoning** and say how **hardboard boards** are stacked in air seasoning.

5. Find a chapter on **Insulation,** section **Heat Transfer**.
   Find and list **three ways of heat transfer**.

6. Find **saws** and describe the **plate saw**.

7. Answer this question – Could you carve **sycamore**?

# FINDING OUT INFORMATION

## Use a standard text book.

**Look in the index to find the information you need and fill in the missing words.**

**Manufactured Boards**

Examples of manufactured boards often used in joinery are p_____ wood, b_____ board, l_____ board and c_____ board.

**Plywoods** are manufactured from _____ peeled from a log, _____ together up to the necessary and with the grain of each veneer at right _____ to the next. There will usually be an odd number of _____ in a _____ so that the grain of _____ faces will run the _____ way and the board will be _____ 'b_____'

**Blockboards** are meant to be a cheaper _____ to the thicker_____. They are likely to be _____ slight _____ stable than _____ but are very useful for_____ joinery which needs _____ unframed, rigid, flat _____, as in cupboard carcass _____. Blockboards are _____ suited to _____ use since the cores are usually _____ with UF resin and may be only spot **Laminboards** are like _____ but the cores are made _____ from _____ 3-7 mm _____, producing a heavier, _____ stable _____.

**Chipboards** are made from wood _____ or particles derived from forest thinnings or from _____ production.

**Answers on page 62**

# READING ANSWER SHEET 1

## Manufactured Boards.

Examples of manufactured boards often used in joinery are *plywood, blockboard, laminboard* and *chipboard.*

**Plywoods** are manufactured from *veneers* peeled from a log, *bonded* together up to the necessary *thickness* and with the grain of each veneer at right *angles* to the next. There will usually be an odd number of *veneers* in a *board* so that the grain of *both* faces will run the same way and the board will be *'balanced'.*

**Blockboards** are meant to be a cheaper *alternative* to the thicker *plywoods.* They are likely to be slightly *less* stable than *plywood* but are very useful for *interior* joinery which needs unframed, rigid, flat *panels,* as in cupboard carcass *construction. Blockboards are* not suited to *external* use since the cores are usually *glued* with UF resin and may be only spot *glued.*

**Laminboards** are like *blockboard* but the cores are made *up* from *veneers* 3-7 mm *thick,* producing a heavier, *more* stable *panel.*

**Chipboards** are made from wood *chips* or particles derived from forest thinnings or from *joinery* production.

TASK SHEET UPGRADE CONSTRUCTION

# SELF-ASSESSMENT QUESTIONNAIRE

## Reading

Please tick a box

| | | |
|---|---|---|
| I now understand that there are different ways of reading | Yes | No |
| I know which one to use to suit my purpose | Yes | No |
| I know how to find information quickly | Yes | No |
| I know how to make notes from a passage | Yes | No |

I require further work on .....

**If you have answered NO to any of these questions try reading this section again or ask your tutor to help you.**

CONSTRUCTION
UPGRADE
CONSTRUCTION

FACT SHEET UPGRADE CONSTRUCTION

# GETTING THE MESSAGE ACROSS

The **AIM** of communicating by writing is:

**To Get the Message Across by**

- being clear
- being brief
- keeping it simple, straight forward
- getting the right tone
- using the most suitable words for the purpose
- keeping the reader's interest
- Having a clear and attractive layout (presentation).

**Look at this note left for the milkman:**

*Dear Milkman*
*I'm just writing to tell you that we will need an extra pint as my aunty is coming over from America to stay for several weeks. We haven't seen her since 1979 so we're all really looking forward to seeing her. She likes orange juice too so if you could leave a carton sometime I'd be grateful.*

*Thanks*
*Mrs Smith*

- Is it brief? Has the milkman got time to read all this?
- Is the message clear (when has he to leave the extra order)?
- Is it right for the purpose?
- Does the milkman need all of this information?

Does it get the message across?

**No!**

The milkman will now have to call back to Mrs Smith's and get all the details.

Core Skills
C:1·2

Basic Skills Standards
C:9

TASK SHEET UPGRADE CONSTRUCTION

# STYLE

Matching your style of writing to the type of work you are doing.

| Are you writing any of these? | | yes | no |
|---|---|---|---|
| 1 | • a postcard to a friend | | |
| 2 | • a letter to a widowed relative | | |
| 3 | • an assignment | | |
| 4 | • a project | | |
| 5 | • a letter to a friend | | |
| 6 | • an essay | | |
| 7 | • instructions for use of a machine | | |
| 8 | • a report | | |
| 9 | • notes for yourself | | |
| 10 | • a memo | | |
| 11 | • a Curriculum Vitae | | |
| 12 | • a job application | | |

| | |
|---|---|
| 1,5,9 | can be chatty and as informal as you like |
| 2 | need to be thought about carefully |
| 7,8,10 | need to be brief but very clear |
| 11,12 | need to follow certain rules – consider layout etc. |
| 3,4,6 | you will have been told how to organise these – if not **ASK!** |

**Ask yourself – who's going to read it?**

Core Skills
C:1·2

Basic Skills Standards
C:9

FACT SHEET
UPGRADE
CONSTRUCTION

# PUNCTUATION

**What is it?**

- it's a series of marks eg. **commas, full stops, question marks, capital letters** which are put into writing.

**What does it do?**

- it helps to make the sense clear and it helps the writer to organise his words.

**FULL STOP** ■

**Shows the end of a sentence.**

**A sentence begins with a capital letter and ends with a full stop.**

**A sentence should be complete and make sense.**

eg. Douglas fir is a very strong wood.

**COMMA** ,

**Shows a pause and is used to:**

- **separate items in a list**
  eg. Joiners & Carpenters lay floorboards, hang doors, fit windows and make staircases
- **separate different parts of a sentence**
  eg. This particular softwood, which comes from Brazil, is suitable only for joinery
- **separate a name or a description within a sentence**
  eg. One of the hardest of softwoods, Douglas fir, comes from Canada.

**QUESTION MARK** ?

**Shows a question has been asked – it completes a sentence like a full stop.**

eg. Where does Parana pine come from?

**CAPITAL LETTERS**

**Are used at the beginning of sentences and for proper nouns (eg. town, countries, names and titles)**

eg. **R**edwood comes from the **B**altic countries and **N**orth **R**ussia.

**EXCLAMATION MARK** !

**Shows an order** "Turn the machine off!"

**Used when shouting** "Help!" "Fire!"

**Used to show emphasis** eg. "The accident was terrible!"

eg. "That scaffolding is incomplete so don't use it!"

Core Skills
C:1·2

Basic Skills Standards
C:9

# PUNCTUATION

**Without punctuation this passage would not make sense.**

1. Look at this passage. It has **no punctuation** in it. Can you sort out the different words?

whatsthedifferencebetweenajoinerandacarpenteracarpenter istheonewhodoeseverythingtodowithtimberonabuildingsite andajoineristheonewhomakescabinetsdoorswindowsandot herthingsbothofthemhavetochoosethecorrecttimbercutittosi zewithsawsandthenfixitintotherightpositionusingthenecess arytoolstheyneedtobeabletoreaddrawingsandworkquicklya ndaccuratelytogivenmeasurmentssomeofthejobstheymaydo includelayingfloorboardshangingdoorsfittingwindowsmaki ngandinstallingstaircasesfittingfittedwardrobesandmakinga ndinstallingkitchenunitsphysicalstrengthandtheabilitytoco pewithpoorweatherconditionsarevital

2. This is the passage with the **words** sorted out. Can you put in **full stops, commas** and **question marks?**

Whats the difference between a joiner and a carpenter a carpenter is the one who does everything to do with timber on a building site and a joiner is the one who makes cabinets doors windows and other things both of them have to choose the correct timber cut it to size with saws and then fix it into the right position using the necessary tools they need to be able to read drawings and work quickly and accurately to given measurements some of the jobs they may do include laying floorboards hanging doors fitting windows making and installing staircases fitting fitted wardrobes and making and installing kitchen units physical strength and the ability to cope with poor weather conditions are vital

Core Skills
C:1·2

Basic Skills Standards
C:9

# PUNCTUATION

3. This is the passage with some **punctuation marks** in it – **full stops**, **commas** and **questions marks**. Can you put in **capital letters?**

What's the difference between a joiner and a carpenter? a carpenter is the one who does everything to do with timber on a building site and a joiner is the one who makes cabinets, doors, windows and other things. both of them have to choose the correct timber, cut it to size with saws and then fix it into the right position using the necessary tools, they need to be able to read drawings and work quickly and accurately to given measurements. some of the jobs they may do include laying floorboards, hanging doors, fitting windows, making and installing staircases, fitting fitted wardrobes and making and installing kitchen units, physical strength and the ability to cope with poor weather conditions are vital.

4. This is the passage with **capital letters** in it.

What's the difference between a joiner and a carpenter? A carpenter is the one who does everything to do with timber on a building site and a joiner is the one who makes cabinets, doors, windows and other things. Both of them have to choose the correct timber, cut it to size with saws and then fix it into the right position using the necessary tools, they need to be able to read drawings and work quickly and accurately to given measurements. Some of the jobs they may do include laying floorboards, hanging doors, fitting windows, making and installing staircases, fitting fitted wardrobes and making and installing kitchen units, physical strength and the ability to cope with poor weather conditions are vital.

**We can now understand the passage**

Core Skills
C:1·2

Basic Skills Standards
C:9

TASK SHEET UPGRADE CONSTRUCTION

# PUNCTUATION

**Have a go. Look at these three passages about wood.**

**Put in capital letters, commas and full stops.**

1. **Douglas fir**
   one of the hardest of the softwoods douglas fir is found in the pacific coast region of the usa and canada a very strong wood reddish brown in colour it is available in long lengths and large sections there are no problems when working this wood either by hand or machine

   **Answer:**

2. **Parana pine**
   this softwood which comes from brazil in south america is suitable only for interior joinery its brittleness and lack of durability render it unsuitable for exterior use the timber is practically knot-free and comes in long lengths it is light to darkish brown in colour

   **Answer:**

3. **Redwood**
   this wood imported in large amounts from the baltic countries and north russia is also grown in scotland it is the softwood used the most in great britain a pale reddish brown in colour it is used for all classes of work in building being durable easy to work with and straight grained sometimes knots may be a nuisance some of its uses are for joists flooring beams windows doors and rafters.

   **Answer:**



Core Skills
C:1·2

Basic Skills Standards
C:9

# PUNCTUATION

**Rewrite the following, putting in capital letters, full stops and commas.**

## The History of Sawing

1. the felling of trees took place in autumn and winter months not spring and summer because the sap was down at this time
2. craftsmen thought that it made the timber more durable and that in the case of elm it gave the wood a better colour
3. the sawing of tree trunk into planks a very time-consuming business was still done by hand well into the twentieth century
4. the men worked over a sawpit often a permanent construction as deep as 6' and as long as 15'
5. the saw in use was a pit saw often of 7' tapering in width from 10" at the top to about 3" at the bottom end
6. crosscut sawing a much easier process than pit sawing used a two handled crosscut saw
7. some sawpits still in existence in the chiltern woods remind us of the pit sawyers at work
8. as the tannin is contained in the bast layer the bark was peeled from the trees in cylindrical sections during april may and june when it was easily removed

**Answers:**

Core Skills
C:1·2

Basic Skills Standards
C:9

FACT SHEET
UPGRADE
CONSTRUCTION

# GRAMMAR

## What is it?

### Grammar is the science of the correct use of language.

It's about the structure of language and about obeying the rules of a language.

**If we say:** "It **were** shocking, that accident"

or

"Me and **him was** going to the match"

**we are not obeying the rules of grammar.**

**Often we know if something doesn't look or sound right and we can alter it or ask someone to help us.**

### Let's look at some of the main parts of grammar.

SENTENCE | NOUN | ADJECTIVE | VERB

**Sentence** This is words put together to make complete sense.
A sentence must have a verb in it.
eg. Some 40,000 accidents **occur** each year in the construction industry.

**Noun** The name of an object or person or place:-
eg. timber, tool, Bill, Newcastle.

**Adjective** A word which describes a noun:
eg. the tool is **sharp**, **heavy** timber, a **long** ladder.

**Verb** A word which describes an action:
eg. he **lifted** the load, we **will report** the accident, I **was wearing** a safety helmet and gloves.

**Remember** am, are, is, have, has, had, was, were, would, could, should are all verbs.

**Use Grammar well and you will get the message across. You will communicate well.**

# WRITING SENTENCES

**Try to complete these sentences with suitable words.**

1. Felling is the process of cutting down .....

2. It is done when trees have reached .....

3. It is also done if trees need .....

4. When the tree has been felled, the branches are cut off and the trunk .....

5. The log is the part of the tree which is converted .....

Core Skills
C:1·2

Basic Skills Standards
C:4

# WRITING SENTENCES

## Using Key Words to Form Sentences

**Make up sentences from these key words.**

**Example:**

| | | |
|---|---|---|
| **tree** | **three** | **roots, stem and crown** |

A **tree** is made up of **three** main parts which are **roots, stem and crown**

1. **Most timber** **carpentry and joinery use**
   **softwood** **Sweden, Finland and USSR**

2. **Spruce** **known** **world**
   **Christmas**

3. **Parana Pine** **long lengths** **knot-free**
   **suitable** **interior joinery**

4. **Tropical hardwoods** **rain forests**
   **South America, Africa and S.E. Asia**

5. **Western red cedar** **durable**
   **immune** **insects or fungi**

Core Skills
C:1·2

Basic Skills Standards
C:9

# WRITING SENTENCES

## Using Key Words to Describe a Process

**Use the jumbled words in the box to describe the process of conversion.**

**What is conversion?**

| | | |
|---|---|---|
| | sawn | living trees |
| thinning out | log | removed |
| mature | cutting down | felling |
| branches | | converted |
| broken down | | timber |
| | pieces for specific purposes | |

**Answer:**

Core Skills
C:1·2

Basic Skills Standards
C:9

FACT SHEET
UPGRADE
CONSTRUCTION

# USING A DICTIONARY

It may seem that a **dictionary** is hard to use if you've no idea **how to spell** a word.

**Think** first how the word might be spelt. Let's imagine this situation.

> You have been told to use **phenol formaldehyde adhesive** to glue a component (eg. window) which you are assembling. Certain adhesives can be harmful to the skin and before you start you wish to check this one using the Harmful Substance Guide.

What would you do?

1. Write down the word as you **think** it might be spelt – **fenall**
2. Use the dictionary to check the word.
3. It's not there.
4. Think how else it could be spelt. What about **Phenall**.
5. Check the dictionary and find the correct spelling – phe**nol**

**Keep trying – Don't give up.**

Core Skills
C:1·4

Basic Skills Standards
C:6·3

FACT SHEET
UPGRADE
CONSTRUCTION

# SPELLING

Do you ever have problems spelling certain words?

Yes ☐ No ☐

We **all do.** Here are some techniques to help you to improve your spelling.

- **Use spelling rules** –remember **i** before **e** except after **c**.
  (eg. the joiner gives the client a **receipt** for the meal)
- **Break down words into smaller bits** – it makes them easier to learn.
  (eg. **syc a more** – sycamore)
- **Try to see the word in your mind's eye** as you write it.

- **Use trick ways of remembering.**
  (eg. **bus** is **in busi**ness)
- **Say the word out loud sounding out any silent letters.**
  (eg. this wood has a lot of **k-nots** in it)
- **Write the word over and over** concentrating on the difficult bit.
  (eg. fungi**cide** fungi**cide** fungi**cide** fungi**cide**)
- **Look for any familiar bits within a word** which will help you to remember it.
  (eg. **ma hog any**)
- **Adding bits to a word**. If you know the word **convert** – you can make others from it.
  (eg. conversion, converting, converted)

| Core Skills |
| --- |
| C:1·2 |
| **Basic Skills Standards** |
| C:9 |
| C:15 |
| C:19 |

TASK SHEET
UPGRADE
CONSTRUCTION

# SPELLING

Some words are difficult and need a bit of thought.

**Have a go at spelling the following words correctly:**

- **bus_____** – a firm which employs people eg. Jones Joinery Firm
- **rec___t** – trade suppliers give this piece of paper to show payment has been made
- **g__rd** – for safety's sake, you need to be on this when working in the construction industry
- **cau____** – your boss may give you a warning if you're not wearing a hard hat on a building site
- **ha___d** – a danger (there are many in the construction industry)
- **hea___** – you need to be in good _____ when doing a physical job in the construction industry
- **e___pment** – safety helmets, footwear, ear muffs and goggles are all part of this.

**Check in a Dictionary.**

Core Skills
C:1·2

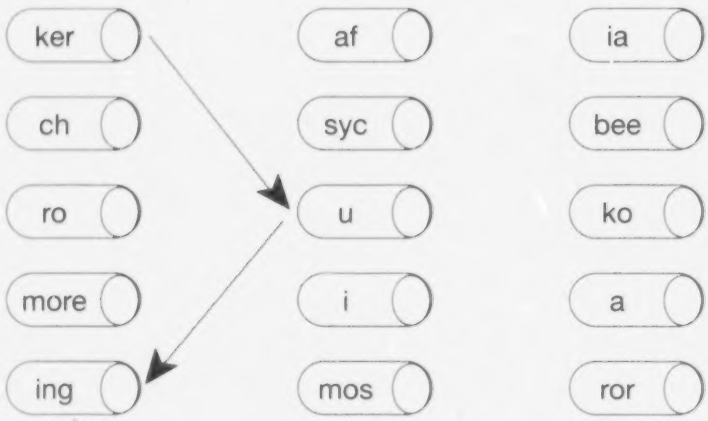
Basic Skills Standards
C:9

TASK SHEET
UPGRADE
CONSTRUCTION

# SPELLING

These woods have been sawn up into pieces. Put them back together to find five hardwoods and five softwoods.

**Hardwoods** eg. Keruing




**Softwoods** eg. Redwood

**Answers:**

keruing, sycamore, beech, iroko, afrormosia

whitewood, redwood, douglas fir, parana pine, western red cedar

FACT SHEET UPGRADE CONSTRUCTION

# SPELLING CHECKLIST

## Timber

| | |
|---|---|
| Douglas fir | Sapele |
| Redwood | Utile |
| Parana pine | Beech |
| Western hemlock | Elm |
| Western red cedar | Keruing |
| Whitewood | Meranti lauan |
| African mahogany | Oak |
| Afrormosia | Sycamore |
| Iroko | Teak |

**Check you can spell all these names of timber. Find ways to help you.**

Core Skills
C:1·2

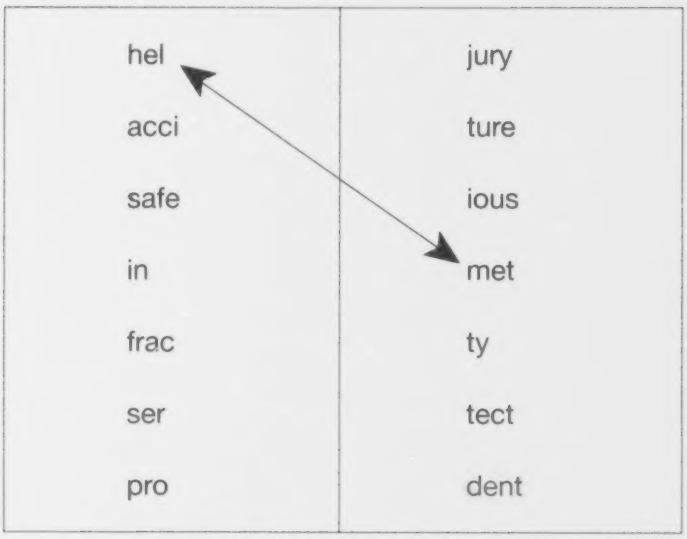
Basic Skills Standards
C:4
C:9

TASK SHEET UPGRADE CONSTRUCTION

# SPELLING

**Match the 2 halves from these words connected with safety to form complete ones.**

**Example:**




Write the complete words here:

**Remember**

1. Learn how to work safely.
2. Obey safety rules.
3. ASK your supervisor if you don't understand any instruction.
4. Report to your supervisor anything that seems dangerous, damaged or faulty.

Core Skills
C:1·2

Basic Skills Standards
C:9

TASK SHEET UPGRADE CONSTRUCTION

# CHECK YOUR SPELLINGS OF FAMILIAR WORDS

**Some of these words are spelt incorrectly. If you are not sure of the correct spelling use a dictionary to help you.**

**Write out the correct spellings under each paragraph. Make sure you learn the correct spelling.**

1. When working in the construction industry you must **all-ways** / **allways** / **always** **ware** / **were** / **wear** the correct **saftey** / **safety** clothing. Be on your **gard** / **guard** / **gaurd** at all times and **antisipate** / **anticepate** / **anticipate** **hazzards** / **hazerds** / **hazards**. Be prepared to act **immediately** / **immeadiatly** / **immediatley** if you see a **danjerous** / **dangrus** / **dangerous** situation.

2. Trees can be divided into hardwoods and softwoods. Most softwoods come from **conniferus** / **coneifferus** / **coniferous** trees whose needle – **leeves** / **leaves** / **leafs** are retained during winter. Hardwoods have **brawd** / **brode** / **broad** leaves which are **usualy** / **usally** / **usually** shed in winter.

3. When the tree is **feld** / **felt** / **felled** and **connverted** / **converted** / **converrted** to boards the excess **moisture** / **moysture** / **mosture** must be removed. This **prowces** / **process** / **proccess** is called **seasonning** / **seasoning** / **seesoning**.

**Use a dictionary to help you.**

| Core Skills |
| --- |
| C:1·2 |

| Basic Skills Standards |
| --- |
| C:6·3 |
| C·9 |

# SPELLING

**Fill in the missing letters to form words:**

| | |
|---|---|
| 1. _ _ r _ _ n _ _ r | worker who does everything to do with timber on a building site. |
| 2. _ o _ _ e _ | he makes cabinets,doors, windows etc. |
| 3. _ _ _ b _ _ | the material you need to make cabinets . . . |
| 4. _ u _ l _ _ _ g / _ i _ e | the place where most joiners and carpenters work. |
| 5. _ a _ | you cut timber with this. |
| 6. _ _ o _ _ _ o _ _ d _ | you lay these. |
| 7. t _ o _ _ | you use these to help you. |
| 8. _ _ n s _ r _ c _ _ _ _ | building. |
| 9. c _ _ o _ o _ _ | a preservative. |
| 10. _ a _ _ _ o _ _ _ | trees that lose leaves are called . . . |
| 11. _ _ h _ _ _ n _ | a reddish brown wood from W. Africa. |
| 12. _ _ l _ g _ _ _ / _ _ l e _ | Douglas fir is used to make these. |
| 13. _ l _ | Ercol furniture is made of this. |
| 14. _ _ n _ e _ _ i _ _ | the process of getting timber ready for use after felling. |
| 15. _ _ a _ u _ _ m _ _ _ _ | you need to be good at figures to work these out. |

Core Skills
C:1·2

Basic Skills Standards
C:9

TASK SHEET UPGRADE CONSTRUCTION

# SPELLING

**Fill in the missing letters to form names:**

1. A tree from Canada & USA used for interior/exterior joinery. _ o _ _ l _ _ / _ i _
2. A non-durable Brazilian timber used for plywood. _ _ r a _ _ / _ _ _ e
3. A white European timber. _ u _ _ _ e _ _ / _ _ r _ c _
4. A West African timber which is very durable. _ f _ _ r _ o _ i _
5. A reddish brown Malaysian timber. _ e _ u _ n _
6. A white European perishable timber. _ y _ _ _ o _ _
7. A very durable Burmese timber. _ e _ _
8. This timber is produced in Malaysia, Indonesia and the Philippines. m _ _ _ _ _ _ / _ a _ a _
9. A yellowish timber from Indonesia. _ _ m _ _
10. A timber with a coarse grain from East Africa. _ _ o _ o

**Consult the table in this section – if you need help**

| Core Skills |
| --- |
| C:1·2 |

| Basic Skills Standards |
| --- |
| C:7·3 |
| C:9 |

TASK SHEET UPGRADE CONSTRUCTION

# WRITING ABOUT IDEAS & FEELINGS

- Write about why you decided to become a joiner/carpenter.
- What subjects were you good at in school?
- Did you enjoy these subjects?
- Can you explain why?
- Did anything else influence you in your decision to become a joiner/carpenter?
- Do you enjoy your job and the training you are receiving?
- Which are the most satisfying parts of the job/training?
- What plans have you got for the future?

**Remember**

- **Think about the subject**
- **Plan what you want to write**
- **Write down any ideas or words**
- **Write out a rough version**
- **Read it through**
- **Check it**
- **Alter it, add to it if necessary**
- **Write it out neatly**

Core Skills
C:1·2

Basic Skills Standards
C:9·2

# WRITING

**Imagine you are Barry Smith and you witnessed the accident reported on the Accident Report form at the end of this section.**

## Write the details of the accident and include:

- where the accident happened
- what Andrew Cooper was doing at the time
- what happened
- what injuries Andrew Cooper received
- who the accident was reported to
- any other details

**Plan carefully what you are going to write.**

**Make sure you have answered all the questions above and included all the necessary details.**

## Check:

**Have you answered the questions in a sensible order?**

**Have you checked your writing for mistakes?**

**Do you need to check spellings in a dictionary?**

**Have you used the correct punctuation?**

**Have you communicated well?**

# LETTER WRITING

**Some reasons for writing a letter:**

- to ask for information/brochures for holidays
- to enter a competition
- to thank someone for a present
- to apply for a job
- to complain to a firm/manufacturer
- to express an opinion (letter to a newspaper)
- to invite a friend/relative to
- to accept a wedding/party invitation
- to order goods
- to send news to a friend/relative
- to send get well wishes to someone
- to congratulate someone (passing driving test)
- to send a present/photos etc.
- to send an excuse note.

**Any others? Can you add some of your own?**

**Which of these have you written?**

Core Skills
C:2·2

Basic Skills Standards
C:9·1

FACT SHEET UPGRADE CONSTRUCTION

# LETTER WRITING

A business letter is written for a specific purpose – for example, sending for a catalogue or brochure, making a complaint or applying for a job.

**Remember**

- **be clear** – give all the relevant points and details **so** plan it out carefully beforehand.
- **be concise** – keep to the point **so** do not include unnecessary information.
- **be courteous** – write in a polite way and the recipient (the person you are writing to) will look favourably on your request.

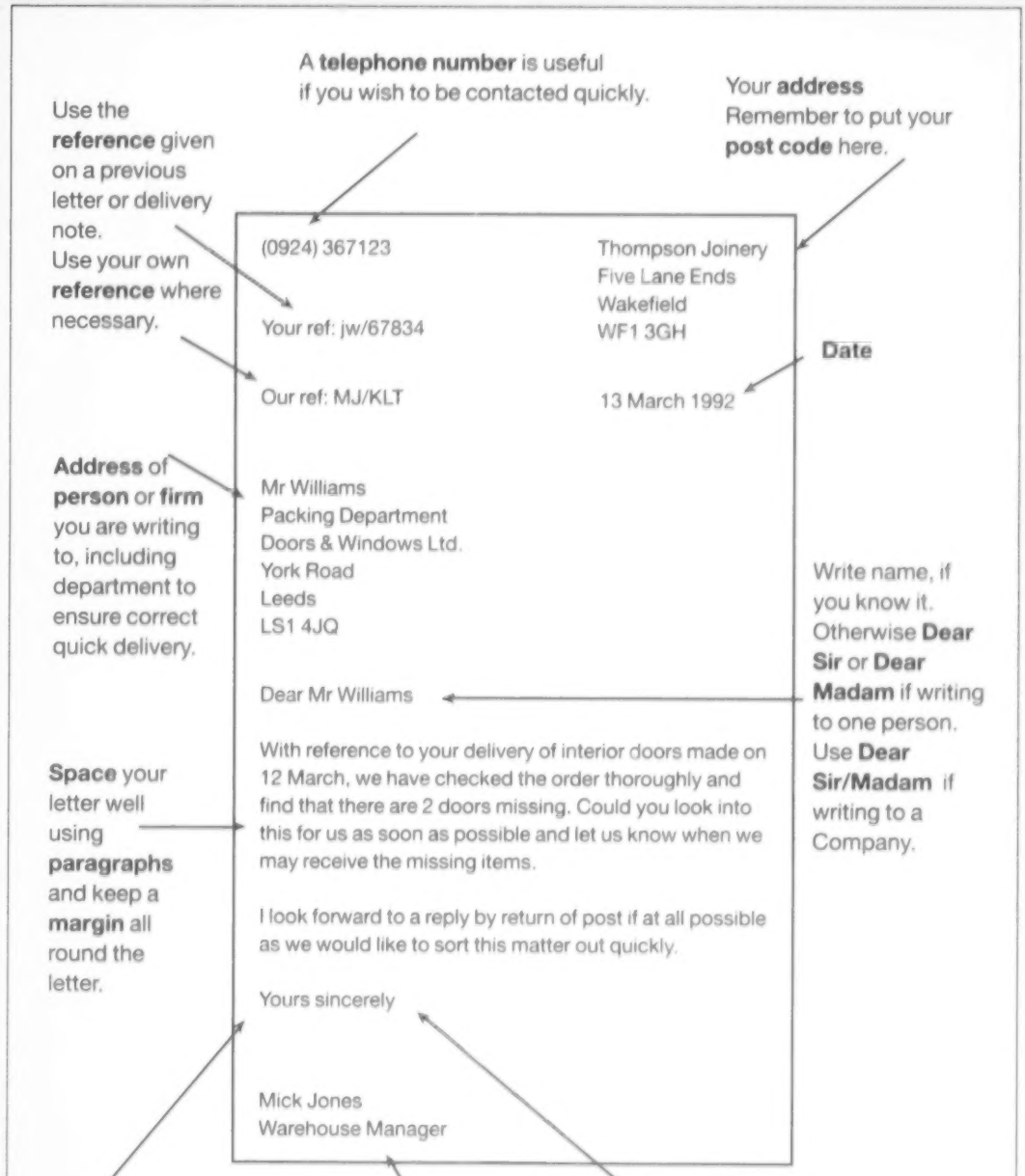
**Follow the layout of a letter given on the next page.**

| Core Skills |
| --- |
| C:2·2 |

| Basic Skills Standards |
| --- |
| C:9·1 |
| C:15·3 |

FACT SHEET
UPGRADE
CONSTRUCTION

# LAYOUT OF A FORMAL/BUSINESS LETTER


A **telephone number** is useful if you wish to be contacted quickly.
Your **address** Remember to put your **post code** here.
Use the **reference** given on a previous letter or delivery note.
Use your own **reference** where necessary.
(0924) 367123
Thompson Joinery
Five Lane Ends
Wakefield
WF1 3GH
Your ref: jw/67834
Our ref: MJ/KLT
**Date**
13 March 1992
**Address** of **person** or **firm** you are writing to, including department to ensure correct quick delivery.
Mr Williams
Packing Department
Doors & Windows Ltd.
York Road
Leeds
LS1 4JQ
Write name, if you know it. Otherwise **Dear Sir** or **Dear Madam** if writing to one person. Use **Dear Sir/Madam** if writing to a Company.
Dear Mr Williams
**Space** your letter well using **paragraphs** and keep a **margin** all round the letter.
With reference to your delivery of interior doors made on 12 March, we have checked the order thoroughly and find that there are 2 doors missing. Could you look into this for us as soon as possible and let us know when we may receive the missing items.
I look forward to a reply by return of post if at all possible as we would like to sort this matter out quickly.
Yours sincerely
Mick Jones
Warehouse Manager
When you have completed your letter write your **signature** underneath **Yours sincerely, Yours faithfully**. Always **sign your name** even if the letter is typed.
Remember to **print** (or type) your **name** and **title** under your signature.
If you started **Dear Sir** or **Dear Madam** you should end with **Yours faithfully**. If you have written to a named person eg. **Dear Mr Williams** then end with **Yours sincerely**.

| Core Skills |
| --- |
| C:2·2 |

| Basic Skills Standards |
| --- |
| C:9·1 |
| C:15·2 |

FACT SHEET UPGRADE CONSTRUCTION

# USEFUL WORDS FOR LETTERS

Yours sincerely

Yours faithfully

with reference

*I am writing to ask you for*

I look forward to hearing from you

I am studying for NVQ Joinery & Carpentry

thank you for your letter

dated 13th March

I would like to request a copy of your

I enclose a stamped, addressed envelope

I am a student at .....

in reply to your letter

I apologise for the delay in replying to your letter

| Core Skills |
| --- |
| C:2·2 |

| Basic Skills Standards |
| --- |
| C:4·1 |
| C:9·1 |

TASK SHEET
UPGRADE
CONSTRUCTION

# APPLYING FOR A JOB

You've seen this advert in the local paper.

**Write a letter** applying for the job.

| | |
|---|---|
| **SITUATIONS VACANT** | **Bricklayers, Joiners, Plasterers, General Labourers, Ground Workers Urgently required**<br><br>*Please write to:*<br>Mr R Thorpe<br>COMPACT BUILDERS<br>Ashgate Road<br>Lincoln<br>LN2 4GH<br><br>*For more information phone:*<br>Lincoln (0522) 323673 |

• Turn to page 94

**"What do you need to put in your letter?" for help in planning it.**

Core Skills
C:2·2

Basic Skills Standards
C:9·1

TASK SHEET UPGRADE CONSTRUCTION

# LETTER WRITING

*Working towards equal opportunities*

## Youth Training Apprenticeships and Traineeships in Construction

The Building Services Department invites applications from school leavers and unemployed young people on their Construction Trades Youth Training Apprenticeship Programme.

Apprenticeships/Traineeships are available in the following craft skills.

**Electrical Apprenticeships**
Duration: Normally 4 years. Pay: Nationally agreed rates of pay apply commencing at £102.58 per week. Qualifications 4 GCSE's Grade 'C' or better including Maths, English and a science subject.

**Building/Building Services Apprenticeships**
(Including Joiners, Bricklayers, Painters, Plasterers and Gas Fitters)

Duration: Normally 3.5 years or 4 years dependent upon trade. Pay: Training allowance will be £40 per week during the first year of training. Qualifications: GCSE passes in Maths, English and a craft subject would be an advantage.

**General Construction/Roadworker Trainees**
Duration: Normally 2 years. Pay: Training allowance will be £40 per week during the first year of training.
Qualifications: No specific qualifications are required but GCSE passes would be advantageous.

Practical training will be undertaken throughout the district on sites/depots of the Departments and at local colleges of further education.

All apprentices and trainees will study in order to obtain nationally recognised vocational qualifications to NVQ levels II and III.

The training will commence in June 1992.

Protective Clothing and basic tools will be provided. Applicants must be resident within the Metropolitan District Council and must be under 18 years of age as at 1st September, 1992. Applications from registered disabled persons up to 21 years of age will also be considered. Application forms are available from Building Services Department, Town Hall (Telephone: Nuneaton 386143)

You have seen this advert in the newspaper and think it may suit a friend of yours who is unemployed. Your friend asks you to help him.

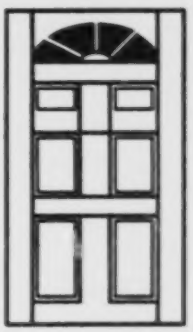
- **Study it carefully.**
- **Write a letter to the address given asking for an application form.**

Core Skills
C:2·2

Basic Skills Standards
C:6·1

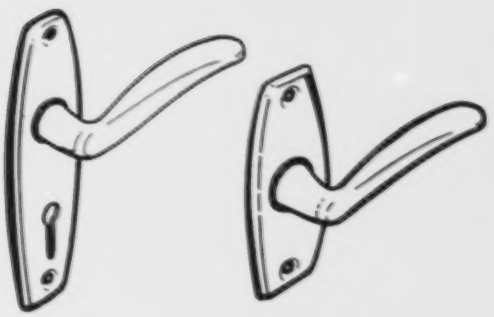
TASK SHEET UPGRADE CONSTRUCTION

# WRITING A LETTER



**Write** to one of the addresses on the next page to obtain information on one of the following:

- **types of doors**
- **types of windows**
- **plywoods**



Look at the sheet of useful addresses on the next page. Select one and **write a letter** to that firm requesting **trade literature** for a project you are working on at College on:

- **door furniture (handles, knobs etc.)**

Core Skills
C:2·2

Basic Skills Standards
C:4·1

# USEFUL ADDRESSES

John Boddy Timber Ltd.
Riverside Sawmills
BOROUGHBRIDGE
N Yorkshire
YO5 9LJ

Landau (Kitchen units and components)
Landau House
Bontoft Avenue
Hull
HU5 4BR

John Carr Sales Ltd.
Watchouse Lane
DONCASTER
South Yorkshire
DN5 9LR

Knobs and Knockers
36-40 York Way
LONDON
N1 9AB

Sagar's and Co.
Tools and Machinery
75a-79 Castle Road
SCARBOROUGH
YO11 1BH

Howarth Timber (Wakefield) Ltd.
Doncaster Road
WAKEFIELD
West Yorkshire

Scott & Sargeant
24-26 East Street
HORSHAM
Sussex
RH12 1HL

Health & Safety Executive
Library & Information Services
Broad Lane
SHEFFIELD
S3 7HQ

Unilock
Latchmere Road
LEEDS
West Yorkshire
LS12 6EB

Jewson
City Sawmills
Clarence Road
LEEDS
West Yorkshire

British Plywood Manufacturers
Wharf Road
Ponders End
ENFIELD
Middlesex
EN3 4TS

T.R.A.D.A. (Timber Research and Development Association)
West Yorkshire
18 Park Row
LEEDS
LS1 5JA

FACT SHEET
UPGRADE
CONSTRUCTION

# LETTER WRITING

## What do you need to put in your letter?

Name and Address of the firm or the person you are writing to

Your address and postcode

A reference number if there is one

The date

Dear Sir/Madam
Dear Mr Jones/Mrs Smith

Remember
Dear Sir/Madam – ends with Yours faithfully
Dear Mr Jones – ends with Yours sincerely

All the necessary points for the letter (planned out carefuly beforehand)

Your name (signed and then printed underneath)

**Remember**

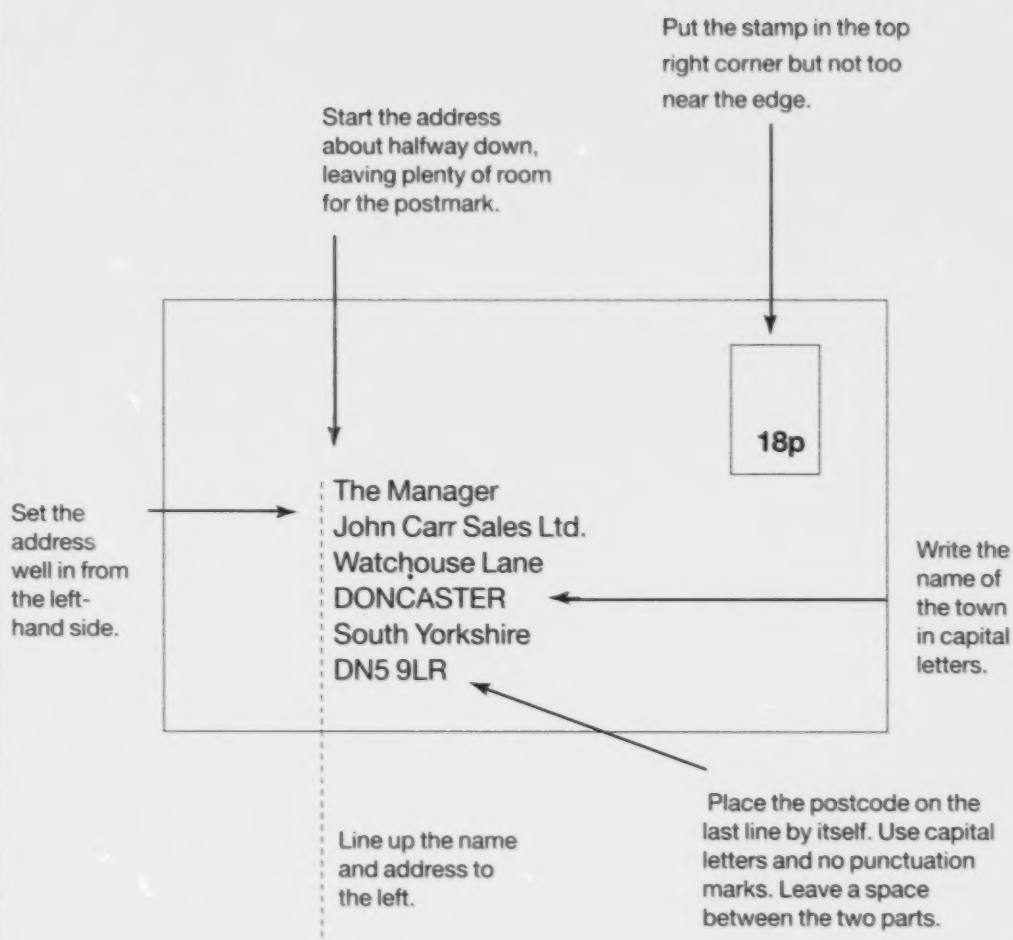
- **be clear**
- **be concise**
- **be courteous.**

Core Skills
C:2·2

Basic Skills Standards
C:4·1

FACT SHEET
UPGRADE
CONSTRUCTION

# ADDRESSING AN ENVELOPE


Put the stamp in the top right corner but not too near the edge.
Start the address about halfway down, leaving plenty of room for the postmark.
18p
The Manager
John Carr Sales Ltd.
Watchouse Lane
DONCASTER
South Yorkshire
DN5 9LR
Set the address well in from the left-hand side.
Write the name of the town in capital letters.
Place the postcode on the last line by itself. Use capital letters and no punctuation marks. Leave a space between the two parts.
Line up the name and address to the left.

Core Skills
C:2·2

Basic Skills Standards
C:6·2

TASK SHEET UPGRADE CONSTRUCTION

# ADDRESSING AN ENVELOPE

**Address the envelopes below to the firm you have selected from the useful address sheet.**

Write the address here:

18p

Core Skills

C:2·2

Basic Skills Standards

C:4·1

FACT SHEET
UPGRADE
CONSTRUCTION

# WRITING A MEMO (MEMORANDUM)

## MEMORANDUM

| | | |
|---|---|---|
| **To:** | **Ref:** | **Tel:** |
| **From:** | **Date:** | |
| **Subject:** | | |

Remember → **to follow these points:**

- a memo is only used **inside** an organisation/firm
- a memo is used for communicating short pieces of information
- you don't need **Dear Mr Jones/Mrs Smith** or **Yours sincerely**
- a memo is normally brief but contains all the necessary information
- sign or initial the memo
- use the layout on the next page.

Core Skills
C:1·2

Basic Skills Standards
C:9·1

TASK SHEET UPGRADE CONSTRUCTION

# WRITING A MEMO (MEMORANDUM)

## MEMORANDUM

| | |
|---|---|
| **To:** E Simpson, Foreman | **Ref:** DW/KLT **Tel:** Ext 123 |
| **From:** D White, Manager | **Date:** 12 March 1993 |
| **Subject:** Complaint about new kitchen | |

Mrs Jones has telephoned to complain about her new kitchen. The doors are not hanging properly and are not staying shut. Would you please make sure this is dealt with.

*D. White*

**Imagine you are the foreman.**

**Send a memo back to the manager telling him you have dealt with the problem and saying how you did it.**

## MEMORANDUM

| | |
|---|---|
| **To:** | **Ref:** **Tel:** |
| **From:** | **Date:** |
| **Subject:** | |

| Core Skills |
|---|
| C:1·2 |
| C:1·4 |
| **Basic Skills Standards** |
| C:9·1 |

FACT SHEET UPGRADE CONSTRUCTION

# WRITING A CURRICULUM VITAE (CV)

## Curriculum Vitae

Name

Address

Tel No.

Date of Birth

Education

Qualifications

Exams to be taken

Work Experience

Interests

References

**Remember** **to take note of these points:**

- **Curriculum Vitae (CV)** is Latin for 'the course of one's life'
- you are giving **details** of your **life** and **career** which are relevant to the **job** for which you are applying
- set the CV out **clearly** following the **layout** on the next page
- use **headings** and put **dates** in chronological order
- you should send a **handwritten letter** with your CV when applying for a job.

Core Skills
C:2·2

Basic Skills Standards
C:15·2

FACT SHEET
UPGRADE
CONSTRUCTION

# PLANNING A CURRICULUM VITAE (CV)

## Curriculum Vitae

| | | |
|---|---|---|
| **Name** | Andrew James Cooper | |
| **Address** | 34 Newstead Avenue, Prestfield, Lancs PR2 5JS | |
| **Telephone No** | 0772 251954 | |
| **Date of Birth** | 21.01.75 | **Age** 18 |
| **Education** | 1986-1990<br>1990-1992 | Middlethorpe High School<br>Prestfield College,<br>Construction Sector |
| **Qualifications** | 1991 | GCSE English grade D<br>Maths grade D |
| **Exams to be taken** | June1992 | NVQ Carpentry & Joinery<br>Level II |
| **Work Experience** | 1990-1991 | Jones Joinery Ltd.<br>Church Street<br>Prestfield |
| **Interests** | Stanford Rugby League Club, member of school rugby team, swimming (gold medal, life saving), cinema, making furniture, played trumpet in school orchestra. | |
| **References** | Mr D Smithson, Headmaster<br>Middlethorpe High School<br>Stanford Road, Prestfield PR2 3DE<br><br>Mr S West, Head of Construction Sector<br>Prestfield College<br>Prestfield, Lancs PR1 8TQ | |

**Remember**

- Write a Curriculum Vitae on a separate sheet of paper to your letter.
- Use the headings given in the example and fill in your own details.
- Remember to give details of your interests both at school and at home.
- Write the information clearly and neatly so that it can be easily read.
- Ask someone to check your spelling if you are unsure.
- If possible type it or get it typed.
- Take photocopies so you have them ready in case you apply for more jobs.

Core Skills
C:2·2

Basic Skills Standards
C:15·2

TASK SHEET UPGRADE CONSTRUCTION

# PLANNING A CURRICULUM VITAE (CV)

Fill in your own details on the CV:

## Curriculum Vitae

**Name**

**Address**

**Telephone No**

**Date of Birth** **Age**

**Education**

**Qualifications**

**Exams to be taken**

**Work Experience**

**Interests**

**References**

Core Skills
C:1·2

Basic Skills Standards
C:8

TASK SHEET UPGRADE CONSTRUCTION

# FORM FILLING

**When might you need to fill in a form? – here are some suggestions:**

- when joining a library
- when applying for a season ticket (rugby/football)
- when joining a night school class
- to get a doctor's prescription
- to join a Union
- to book a holiday
- to apply for insurance
- to tax a car
- to order materials for work
- to report an accident at work.

**Have you filled in any other forms recently?**

Some forms are simple and can be filled in fairly quickly.

Some are more complicated and need thinking about.

Remember

- **Take your time and read through the form carefully.**
- **Search for information required eg. National Insurance Number.**
- **Look up words you are not sure of in a dictionary or ask for help.**
- **Write it out in rough and ask someone to check it for you.**
- **Follow any instructions such as PLEASE USE CAPITAL LETTERS.**

Core Skills
C:1·2

Basic Skills Standards
C:8

FACT SHEET UPGRADE CONSTRUCTION

# FORM FILLING

## We need to fill in a variety of forms in our daily life.

## Here are some examples:

### To send for information

Send for our free brochure

Mr/Mrs/Miss.....

Address.....

.....

Quality and design is our trademark

### To send a donation

I am pleased to enclose £.....
as a donation to the HELP CHILDREN

Please send me further information on the HELP CHILDREN SOCIETY

Name.....

Address.....

.....

HELP CHILDREN

### To enter a competition

**Win a holiday in Paris**

Answer the following questions:

The Eiffel Tower is in Amsterdam / Paris / Madrid

The Champs Elysées is a road / a café / a meal

Complete this in less than 15 words:

I would love to go to Paris because:

.....

.....

Name.....

Address.....

.....

### To send for free samples

For more information, please tick the appropriate box and return the coupon.

Brochure ☐

Pack (booklet & instruction leaflet) ☐

Free sample ☐

Name.....

Address.....

.....

Post code.....

Send to.....

.....

### For membership of a society

I would liked to become a member of the British Bird Watchers Society

Name.....

Address.....

.....

.....

I enclose a cheque for £ | |

### To order something by post

| Size | 14 | 14½ | 15 | 15½ | 16 | 16½ | 17 | 17½ |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

Please state colour.....

I enclose a cheque value £.....made payable to Classy Shirts of Northampton

Signature.....

Name.....

Address.....

.....

PLEASE USE CAPITAL LETTERS

### To join a library

CENTRAL LIBRARY

Name.....

Address.....

.....

Age.....

Tickets required.....

Core Skills

C:1·2

Basic Skills Standards

C:3

FACT SHEET
UPGRADE
CONSTRUCTION

# WRITING AN ACCIDENT REPORT

## Accident report form

Name .....

Address .....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

**Remember** → **to take note of these points:**

- **think** first, don't rush into it
- **read** through the whole form first
- be sure you **understand** everything if not, ask
- do it in **pencil** first not ink
- make sure you have **answered** everything you can
- ask someone to **check** it with you
- **write** clearly in the space allowed.

Core Skills
C:1·2

Basic Skills Standards
C:8

TASK SHEET UPGRADE CONSTRUCTION

# FILLING IN AN ACCIDENT REPORT FORM

**Select a task and fill in the accident form on the next page with the required information.**

| | |
|---|---|
| **TASK 1** | You are digging on a building site when you disturb a rat which bites you. You have to go to the hospital to receive a tetanus injection. Fill in the accident report form with as much detail as you can. |
| **TASK 2** | You are working on a housing development site when a bull from a neighbouring field attacks you. You receive injuries to your leg. (fracture) and need hospital treatment. Fill in the accident report form with as much detail as you can. |
| **TASK 3** | You are working on a new house fitting windows to the upper storey. As you are climbing the ladder you overbalance and fall off breaking your right arm. You receive treatment at Casualty. Fill in an accident form in as much detail as possible. |
| **TASK 4** | You are boxing central heating pipes in an old house. There is a gas leak which causes an explosion. You receive burns to face and arms which need hospital treatment. Fill in the accident form in as much detail as possible. |

Core Skills
C:1·2

Basic Skills Standards
C:8

TASK SHEET UPGRADE CONSTRUCTION

# ACCIDENT REPORT FORM

**Notice of Accident • Injury and Dangerous Occurrence**

Full Name and Address of Injured Person: .....

.....

.....

Date of Birth: ..... Male/Female: .....

Occupation: .....

Date of Commencement: .....

| Was in the injured person in the employ of your department – **YES/NO** If not, please specify (tick the box) | Resident | Volunteer | Visitor | Client | Schoolchild | Specify Other |
|---|---|---|---|---|---|---|
| | | | | | | |

When did the accident occur? Date: ..... Time: .....a.m./p.m.

Hours worked: .....

Hours normally worked: .....

Exact place where accident happened: .....

When was the accident reported and to whom: .....

When accident was entered into accident book: .....

Are you satisfied that the accident occurred as stated: .....

.....

.....

What injuries were received: .....

(please state left or right where appropriate) .....

.....

What was person doing at the time of the accident: .....

.....

.....

**Kind of Accident**

Indicate what kind of accident led to the injury or condition (tick one box)

| | | | |
|---|---|---|---|
| Contact with moving machinery or material being machined ☐ 1 | Injured whilst handling, lifting or carrying ☐ 5 | Trapped by something collapsing or over-turning ☐ 8 | Exposed to an Explosion ☐ 12 |
| Struck by moving, including flying or falling, objects ☐ 2 | Slip, trip or fall on same level ☐ 6 | Drowning or asphyxiation ☐ 9 | Contact with electricity or an electrical discharge ☐ 12 |
| Struck by moving vehicle ☐ 3 | Fall from a height ☐ | Exposure to or contact with a harmful substance ☐ 10 | Injured by an animal ☐ 14 |
| Struck against something fixed or stationary ☐ 4 | Distance through which person fell ☐ (metres) | Exposure to fire ☐ 11 | Other kind of accident (give details below) ☐ 15 |

Core Skills

C:1·2

Basic Skills Standards

C:8

# ACCIDENT REPORT FORM continued:

**Agent(s) Involved**

Indicate, which, if any, of the categories of agent or factor below were involved (tick one or more of the boxes):

| | | | |
|---|---|---|---|
| Machinery/ equipment for lifting and conveying ☐ 1 | Process plant, pipework or bulk storage ☐ 5 | Live animal ☐ 9 | Ladder or scaffolding ☐ 13 |
| Portable power or hand tool ☐ 2 | Any material, substance or product being handled used or stored ☐ 6 | Moveable container or package of any kind ☐ 10 | Construction formwork, shuttering and falsework ☐ 14 |
| Any vehicle or associated equipment/ machinery ☐ 3 | Gas, vapour, dust fume or oxygen deficient atmosphere ☐ 7 | Floor, ground stairs or any working surface ☐ 11 | Electricity supply cable wiring apparatus or equipment ☐ 15 |
| Other machinery ☐ 4 | Pathogen or infected material ☐ 8 | Building, engineering structure or excavation/under-ground working ☐ 12 | Entertainment or sporting facilities or equipment ☐ 16 |
| | | | Any other agent ☐ 17 |

Name and address of witnessess (if any): .....

.....

.....

.....

Is incapacity likely to exceed three days? **YES/NO**
(not including the day of the accident)

What action has been taken to eliminate hazard? .....

.....

.....

Does the incurrence involve a flammable gas incident? **YES/NO**

Describe what happened: .....

.....

.....

.....

.....

.....

.....

Signature: (Head of Department or Section) .....

Department: ..... Date: .....

This form must be returned to your Personnel Department WITHOUT DELAY. All serious accidents, dangerous occurrences and gas incidents to be telephoned to the Department at the time of occurrence.

TASK SHEET UPGRADE CONSTRUCTION

# FORM FILLING

**Complete the order form requesting the following materials:**

**3 mortice locks** (£3.00 each)
**3 sets of furniture** (£1.75 each)
**2 night latches** (£3.50 each)

You require these within **2 weeks of order date**.

ORDER/REQUISITION

Registered office

No. .....

Date .....

To .....

From .....

Address.....

Site address.....

.....

.....

.....

.....

Please supply or order for delivery to the above site the following:

| Description | Quantity | Rate | | Date required by |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Site manager/foreman .....

*Note:* Please advise site within 24 hours of request if order cannot be fulfilled by date required

Core Skills
C:1·2

Basic Skills Standards
C:3

# NOTE-TAKING NOTE-MAKING

## When might you do these?

**At College:**

- **When** copying notes from the blackboard
- **When** taking dictated notes
- **When** making notes from textbooks
- **When** reading manuals/textbooks.

---

**At Home:**

- **When** taking phone messages
- **When** leaving messages
- **When** writing lists (of things to buy)
- **When** using a memory aid (Tel. Tom Tues.)
- **When** searching through the classified advertisements and comparing prices
- **When** looking at timetables/magazines, newspapers.

---

**At Work:**

- **When** taking telephone messages
- **When** making lists of materials for a job
- **When** making lists of prices for a job
- **When** looking through trade literature catalogues etc.

# THERE ARE 4 POINTS TO CONSIDER

**1.**

**MAKE SURE** you **understand** what you have to take **notes** about.

Ask your tutor if you are uncertain.

**2.**

**MAKE SURE** you get only the **mainpoints** of **information** down.
Don't write in full sentences.Just write down **key words/points.**

**3.**

**REMEMBER** you will have your **own** way of taking notes.
No other person will have the same method.
Only **YOU** need to be able to understand your notes.

**4.**

**REMEMBER** not to **cram** notes onto a page or they will be very difficult to understand.

**SO** – leave **spaces** between notes and leaves **lines** between each section or paragraph.

| Basic Skills Standards |
|---|
| C:12 |
| C:13 |
| C:16·2 |
| C:17 |

FACT SHEET
UPGRADE
CONSTRUCTION

# NOTE-TAKING

## Objectives:

- In this section you will learn 4 different techniques which will help you when making or taking notes:

  1 **Abbreviations** (or shortening words)

  2 **Using symbols** (standard ones or your own)

  3 **Leaving out unnecessary words** (taking down key words)

  4 **Using numbers and letters** (numbering or lettering points help you to order your notes).

## Benefits:

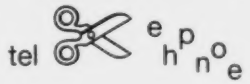
- You will save time
- You will be able to take down more information quicker
- Your work will be better organised and clearer
- You will have useful information for revision purposes.

| Basic Skills Standards |
|---|
| C:12 |
| C:13 |
| C:16·2 |
| C:17 |

TASK SHEET
UPGRADE
CONSTRUCTION

# ABBREVIATIONS

To **abbreviate** means to **reduce** or **cut short**.



There are some **standard abbreviations** which may have been seen or used already. Do you know what these mean?

| | | | |
|---|---|---|---|
| approx. | ..... | eg. | ..... |
| ref. no. | ..... | min. | ..... |
| intro. | ..... | equiv. | ..... |
| v. | ..... | tel. no. | ..... |
| a.m. | ..... | p.m. | ..... |

Look at this example:

He will arrive in 5 mins. at approx. 8 p.m.
**means**
He will arrive in 5 minutes at approximately 8 in the evening.

Try these four sentences. **Abbreviate** the words **in bold** print. **Remember** to put a full stop after the abbreviation.

1. The **tree** was felled at **approximately six in the morning**.

.....

2. My brother did **City and Guilds Part 1** Craft course in **Carpentry and Joinery**.

.....

3. The **introduction** to fixed **woodworking machines** is **very interesting**.

.....

4. I am doing a **National Vocational Qualification** in **Joinery & Carpentry**.

.....

| Basic Skills Standards |
|---|
| C:9·1 |
| C:12 |
| C:13 |

**Answers on page 135**

FACT SHEET
UPGRADE
CONSTRUCTION

# STANDARD ABBREVIATIONS USED IN JOINERY & CARPENTRY

There are many standard abbreviations which will be used on your course, and in the timber trade. You will see them in catalogues and on timber price lists. It will help you if you are familiar with them and can use them easily. They will save you a great deal of time.

| | |
|---|---|
| **EX** | sawn to nominal size |
| **S1S** | surfaced one side |
| **P1S** | planed one side |
| **S1S1E** | surfaced one side and one edge |
| **P1S1E** | planed one side and one edge |
| **S1S2E** | surfaced one side and two edges |
| **P1S2E** | planed one side and two edges |
| **S4S** | squared four sides |
| **P4S** | planed four sides |
| **P.A.R.** | planed all round |
| **V P** | vertical plane |
| **S V P** | side vertical plane |
| **H P** | horizontal plane |
| **H. W.** | hardwood |
| **S. W.** | softwood |
| **INT** | interior use only |
| **BR** | boil-resistant |
| **WBP** | weather and boil-proof |
| **M R** | moisture resistant |
| **U F** | urea formaldehyde |
| **R F** | Resorcinal formaldehyde |
| **PF** | Phenol formaldehyde |
| **PVA** | Polyvinyl acetate |

TASK SHEET UPGRADE CONSTRUCTION

# USING ABBREVIATIONS

Here are some more commonly used **abbreviations**.

Do you know any of these already?

| | |
|---|---|
| a.d. | air-dried |
| k.d. | kiln-dried |
| m.c. | moisture content |
| p.t. & g. | planed, tongued and grooved |
| s.e. | squared edged |
| t. & g | tongued and grooved |
| t.g.b. | tongued, grooved and beaded |
| m.r. | moisture resistant |

**See if you can find out what these abbreviations mean?**

| | |
|---|---|
| **t.g.v** | |
| **T.R.A.D.A.** | |
| **w.b.p.** | |
| **PVA** | |
| **u/s** | |
| **S1S1E** | |
| **B.S.745** | |
| **mm** | |
| **C.I.T.B** | |
| **B R** | |
| **P F** | |
| **U F** | |
| **M.D.F.** | |
| **t. & t.** | |

**Answers on page 135**

TASK SHEET UPGRADE CONSTRUCTION

# ABBREVIATING TREE NAMES

Many tree have long names. It may be useful to abbreviate them if you are writing them down often in class or in your job.

**Have a go at these:**

1. **Sycamore** eg. Syc.
2. **Douglas Fir** .....
3. **Parana Pine** .....
4. **European Redwood** .....
5. **Baltic Whitewood** .....
6. **Columbian Pine** .....
7. **Western Red Cedar** .....
8. **Western Hemlock** .....
9. **African Mahogany** .....
10. **Afrormosia** .....
11. **Japanese Oak** .....
12. **Hickory** .....
13. **Chestnut** .....
14. **Oregon Pine** .....
15. **Meranti Luaun** .....

**Answers on page 135**

TASK SHEET UPGRADE CONSTRUCTION

# USING ABBREVIATIONS

Try re-writing this passage using abbreviations.

**Air seasoning**

This traditional method of seasoning timber takes place in open-sided sheds and exposes the timber to the joint action of circulating air and temperature. This process expels excess moisture through evaporation. An appropriate reduction in moisture content is a slow process and depends on the amount of exposure, the type of wood (hardwood or softwood) the species of wood and the cross sectional size.

**Write here:**

| Basic Skills Standards |
| --- |
| C:13 |
| C:17 |

**Answers on page 136**

TASK SHEET
UPGRADE
CONSTRUCTION

# SYMBOLS

Some **mathematical symbols** are very useful in note-taking.

Do you know what the following mean?

| | | | |
|---|---|---|---|
| ∴ | ..... | = | ..... |
| ∵ | ..... | – | ..... |
| + | ..... | ÷ | ..... |
| % | ..... | | |

ARROWS can also be used:–

↑ – increase

↓ – decrease

→ – up to, until

**Try re-writing these sentences replacing words where possible with symbols:–**

1. Because of winter weather outdoor joinery work will decrease in January.
2. It will therefore start to increase in April.
3. Until fairly recently walnut was used extensively for furniture.
4. The percentage of wood from Indonesia has increased.
5. Ninety divided by three is equal to five multiplied by six.

1. .....
2. .....
3. .....
4. .....
5. .....

| Basic Skills Standards |
|---|
| C:12 |
| C:13 |
| C:16·2 |

**Answers on page 136**

# USING LETTERS AND NUMBERS

This involves looking at the text or passage and **making notes in point form**.

- **Have a look at the following passage.**

## SOFTWOODS

Generally speaking softwoods are not furniture woods, although they can be used internally and for parts that do not show. They are the woods for general carpentry and tend to be much cheaper than hardwoods. Such things as floors and roof trusses in ordinary buildings are made from softwoods, as is much domestic woodwork – usually painted, rather than given a clear finish. However, although softwoods suffer more from wear and tear than hardwoods do, it is possible to protect them with tough modern clear finishes. If the object being made has to be as light as possible, softwood should be used. Softwoods take nails more easily than hardwoods and can be used in situations where hardwoods would need joints cut or the parts screwed together.

- **This is how we could present the information in point form.**

## SOFTWOODS

1. Not furniture wood.
2. Can be used internally and for parts that do not show.
3. For general carpentry.
4. Cheaper than hardwoods.
5. Floors and roof trusses made from them.
6. Domestic woodwork (usually painted).
7. They can be protected with modern clear finishes.
8. If object to be light then use softwoods.
9. Takes nails easily.
10. Use in situations where hardwoods would need joints cut or parts screwed together.

| Basic Skills Standards |
| --- |
| C:13 |
| C:17 |

# USING LETTERS AND NUMBERS

**Make notes in point form.**

**ASH**

Ash has an open grain. It is not durable but because of its flexibility and springiness has been the most suitable wood for the shafts of hammers and carts. It can also be used for tools and farm equipment.

**Description:** 1. .....

2. .....

**Ideal for:** a) .....

b) .....

**and also** c) .....

d) .....

**WALNUT**

Walnut was once used a great deal for furniture – there are many antique pieces as evidence – but it is not so common today. It is brown or brownish – red with a close, fairly hard-textured grain and little prominent marking. It is a strong wood and fairly easy to work so surfaces can be brought to a good finish.

**Description:** 1. .....

2. .....

3. .....

**Qualities:** a) .....

b) .....

**used for** c) .....

**Answers on page 136**



| Basic Skills Standards |
| --- |
| C:1.6 |
| C:13 |

# NOTE-TAKING

**Look at this passage and make notes using any or all of the techniques studied:**

**TIMBER STORAGE**

Timber must be looked after before use, or it may be rendered useless by poor storage. It is an expensive material and it is good practice to store and use pieces including fairly small lengths and sections. How to store wood? Longer pieces should be kept straight. They should therefore, because of length, be supported at fairly close intervals. Boards should be stacked neatly on each other so there is no danger of twisting. Anything over 6' is better supported horizontally than left standing upright as there is a danger of it bowing.

Some pieces are not long enough to store horizontally and for these a rack is convenient. Pieces are stored on end and divisions can be made to prevent wood falling over when the rack is not full. Very small pieces which are still of a useful size may be kept on end in a box. Plywood and hardboard are best stored flat.

**Write your answer here:**

| Basic Skills Standards |
| --- |
| C:6·1 |
| C:13 |
| C:17 |

FACT SHEET
UPGRADE
CONSTRUCTION

# INSTRUCTION WORDS

**In this section you will be given:**

- common instruction words used in assignments
- a clear explanation of their meaning
- assignment questions with sample answers.

**Instruction words looked at in this section are:**

- list
- state
- draw
- show by annotated sketches
- select
- describe the procedure
- briefly explain
- write a brief specification for
- enumerate
- determine.

**Each instruction word will be explained separately with a definition, a sample question and a sample answer.**

FACT SHEET UPGRADE CONSTRUCTION

# LIST

**List –** write the information requested in the form of a list. Firstly, look carefully at the questions and note how many things you are asked to list and what the list is about.

**Question:**

- **List 5** softwoods and **5** hardwoods used in **joinery** and **carpentry**.

**Answer:**

| **Softwoods** | **Hardwoods** |
|---|---|
| European Redwood | Mahogany |
| European Whitewood | Beech |
| Parana pine | Teak |
| Douglas fir | Ash |
| Hemlock | Oak |

The question asks for **5** of each sort, **do not** list more. You won't get extra marks!

**Remember** only list those used in **joinery** and **carpentry**.

# STATE

**State –** if you are asked to state something you must give the relevant facts to the question. Keep your answer to the point and do not give a lot of description.

**Question:**

- **State** a suitable timber for **park benches** and give reasons for your choice.

**Answer:**

Teak

It is very durable under all conditions

It does not require preservative treatment.

FACT SHEET UPGRADE CONSTRUCTION

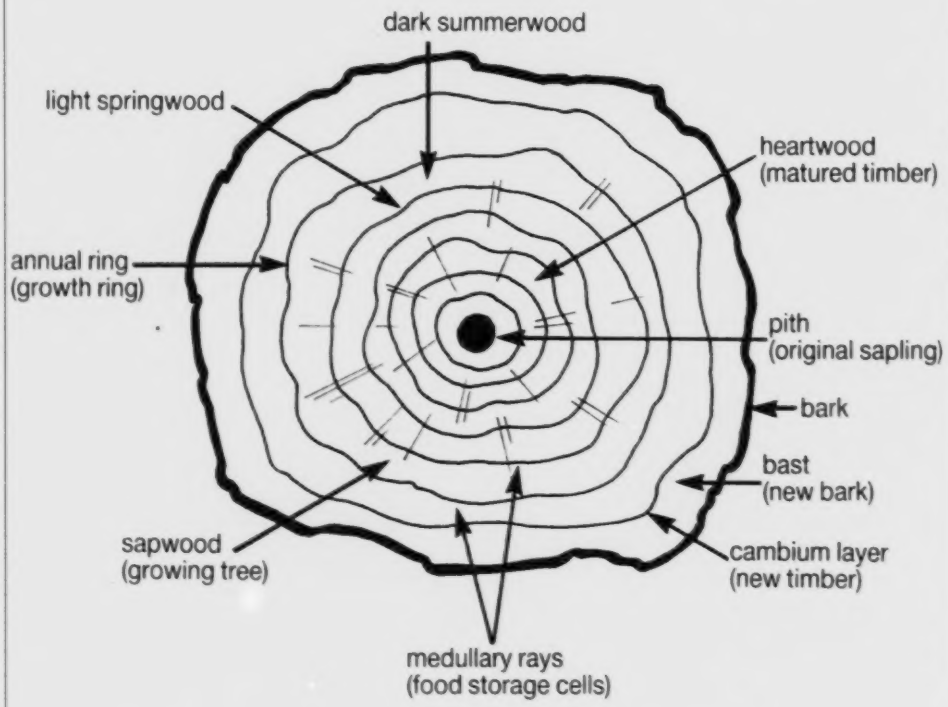
# DRAW

**Draw –** produce a simple line drawing, labelled if necessary.

**Question:**

**Draw a cross section** through the trunk of an oak tree, **naming** the various **parts**.

**Answer:**



FACT SHEET
UPGRADE
CONSTRUCTION

# SHOW BY ANNOTATED SKETCHES

**Show by Annotated Sketches –** this means that you have to answer the questions by means of brief notes and simple sketches.

**Question:**

**Show by annotated sketches** the correct arrangement of the grain when jointing the narrow boards shown in Fig. 1 when making a **table top**.

Fig. 1

**Answer:**

Fig. 2

The reason for this arrangement is that:

a) The annual rings tend to straighten creating a cupped board as in Fig. 3

Fig. 3

b) If they were jointed with the boards all facing the same direction the result would be as shown.

Fig. 4

FACT SHEET
UPGRADE
CONSTRUCTION

# SELECT

**Select** – means to pick out the best or the most suitable from the list given.

**Question:**

- **Select** from the following timbers, two that would be suitable for

a) a joiner's mallet

b) a hammer shaft.

| **Timbers** |
| --- |
| European oak |
| European beech |
| African mahogany |
| Teak |
| European ash |
| Hickory |

- Give reasons for your choices

**Answer:**

a) **A joiner's mallet** – European beech. Beech is a very close, compact-grained timber. These characteristics enable it to withstand hard knocks with splitting.

b) **A hammer shaft** – Hickory/European ash
Both these timbers are noted for their springiness and ability to absorb shock. Hence their suitability for hammer shafts etc.

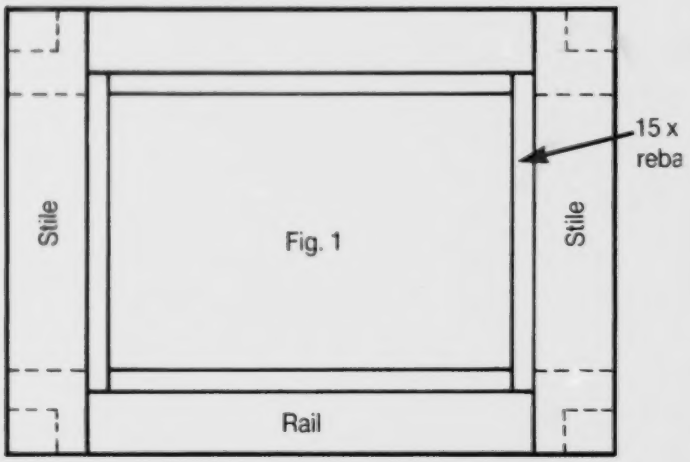
FACT SHEET UPGRADE CONSTRUCTION

# DESCRIBE THE PROCEDURE

**Describe the Procedure –** means describe each stage in order … it could be a short summary of instructions.

**Question:**

- **Describe the setting-out** procedure for the simple frame shown in Fig. 1.




**Answer:**

## Procedure

1. Apply face marks on all timbers.
2. Mark out on the face edge of one stile the overall length allowing waste at either end.
3. Mark in from either end the overall width of the rails.
4. Mark out for the haunches.
5. Transfer the marks onto the opposite edge.
6. Set up the mortice gauge and working from the face side set out (gauge) for the mortice holes.
7. With face marks together set out the second stile from the first.
8. Mark out on the face edge of one rail the overall length allowing waste at either end.
9. Mark in from either end the overall width of the stiles.
10. Transfer the marks onto all faces.
11. Working from the face side gauge for the tenons.

FACT SHEET UPGRADE CONSTRUCTION

# BRIEFLY EXPLAIN

**Briefly explain** – if you are asked to briefly explain it means that you have to give all the relevant facts but as briefly as possible.

**Question:**

- **Briefly explain** the differences between hardwood and softwood.

**Answer:**

1. Most hardwoods are deciduous – they shed their leaves in winter.
2. Most softwoods are evergreen and keep their leaves in winter.
3. The main difference is in the structure not in the texture and will show up under a microscope.
4. Hardwoods bear fruits eg. acorns, chestnuts, apples, pears, oranges etc.
5. Softwoods bear fir cones.
6. The structure of hardwoods is more complicated than softwoods and differs from hardwood to hardwood. Basically hardwoods stain and polish better and are used for furniture more so than softwoods.
7. Hardwoods tend to be more durable under most conditions.

FACT SHEET UPGRADE CONSTRUCTION

# WRITE A BRIEF SPECIFICATION FOR...

**Write a Brief Specification for –** a brief specification is a precise description of all the essential information and job requirements of a particular item of construction that cannot be shown on a drawing, for example: construction of a stormproof window, a hardwood panelled door or a staircase.

**Question:**

- **Write a brief specification** for the laying of **floor boards** to the first floor in a building.

**Answer:**

Provide and lay, to the whole of the first floor, 18mm x 100mm prepared softwood tongued and grooved floor boarding, each board well-cramped up and surface nailed with two 50mm flooring brads to each joist. The heads to be well punched down.

FACT SHEET
UPGRADE
CONSTRUCTION

# ENUMERATE

**Enumerate –** if you are asked to enumerate points you should specify and list them. You could number them in the margin.

**Question:**

- **Enumerate** the **chief points** to be looked for in the selection of timber of good quality.

**Answer:**

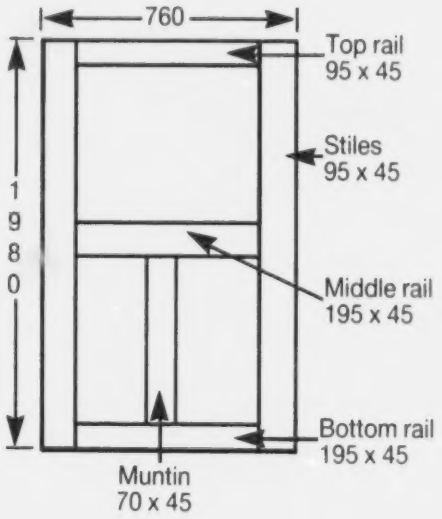
1. Dry.
2. Straight-grained.
3. Free from large knots.
4. Free from shakes.
5. Should contain well-matured. heartwood.
6. Should not contain an over-abundance of sapwood.

FACT SHEET
UPGRADE
CONSTRUCTION

# DETERMINE

**Determine** – if you are asked to determine something you are being asked to work out the length or size etc. of that particular thing. What is important is that you show all the necessary workings in a clear, neat way.

- **Determine the size** of the plywood panels for the door shown in Fig. 1. The depth of the plough groove for the panel is 10mm. **Show all the necessary working out.**




Turn to the next page for the answer

# DETERMINE – ANSWER

**Size of Top Panel**

**Height**

Height of panel + (twice depth of grooves)

= 600 + (2 x 10)

= 620

**Width**

Width of door – (twice width of stiles) + (twice depth of grooves)

= 760 – (2 x 95) + (2 x 10)

= 590

∴ **SIZE OF PANEL = 620 x 590**

**Size of Bottom Panel**

**Height**

Height of door – (Top rail) – (Height top panel) – (Width of middle and bottom rail) + (Twice depth of grooves)

= 1980 – 95 – 600 – (2 x 195) + (2 x 10)

= 1980 – 95 – 600 – 390 + 20

= 915

**Width**

$$\text{Width of door} - \frac{(\text{twice width of stiles}) - (\text{width of muntin}) + (\text{twice depth of grooves})}{2}$$

$$+ \frac{760 - (2 \times 95) - 70 + (2 \times 10)}{2}$$

$$+ \frac{760 - 190 - 70 + 20}{2}$$

$$= \frac{520}{2}$$

= 260

∴ **SIZE OF PANELS = 260 x 915**

TASK SHEET
UPGRADE
CONSTRUCTION

# HERE ARE SOME QUESTIONS FOR YOU TO TRY:

1. List 5 marking out tools.

2. State a tool suitable for forming a rebate.

3. Draw a simple line drawing of a hipped roof.

4. Show by annotated sketches the difference between plywood and blockboard.

5. Select from the following chisels the correct one for cutting a dovetail joint:

   - mortice chisel
   - firmer chisel
   - bevel edged chisel
   - paring chisel.

6. Describe the procedure for fitting rim lock.

7. Briefly explain the difference between a pad saw and a coping saw.

8. Enumerate the main safety points to be considered when using electric power tools.

9. Determine the area of plywood required by a 3-panel door:

   1 panel is 620mm x 590 mm

   2 panels are 260mm x 915mm

   Answer in square metres.

| Core Skills |
| --- |
| C:2·2 |
| C:2·3 |
| C:3·2 |



Answers on pages 136 and 137

FACT SHEET UPGRADE CONSTRUCTION

# OTHER INSTRUCTION WORDS NOT DEALT WITH IN THIS BOOKLET

| | | |
|---|---|---|
| **outline** | – | briefly give all the main points |
| **compare/contrast** | – | show any similarities or any differences between the 2 named items |
| **define** | – | give an exact explanation |
| **explain why** | – | give reason for |
| **sketch** | – | do a free hand drawing but take care to do it neatly |
| **by means of a sketch only show...** | – | no written answer is required, only a sketch |
| **draw to scale** | – | do a fine-line ruled drawing to scale |
| **describe** | – | give a full account of what is being asked in the question |

**Add any others as you meet them:**

..... – .....

..... – .....

..... – .....

..... – .....

..... – .....

# STUDY SKILLS – ANSWER SHEET 1

## Abbreviations

| | |
|---|---|
| approximately | for example |
| reference number | minute |
| introduction | equivalent |
| very | telephone number |
| ante meridian | post meridian |

1. The tree was felled approx. 6 a.m.
2. My brother did C. & G. pt. 1 Craft Course in C. & J.
3. The intro. to fixed woodwkg. mchnes, is v. interestg.
4. I am doing NVQ in J 7 C.

## Using Abbreviations

| | |
|---|---|
| t.g.v. | tongue, grooved and veneered |
| T.R.A.D.A | Timber Research And Development Association |
| wbp | weather and boil proof |
| pva | Polyvinyl acetate |
| u/s | unsorted |
| S1S1E | surfaced one side and one edge |
| B.S. 745 | British standard 745 |
| mm | millimetre |
| C.I.T.B. | Construction Industry Training Board |
| BR | Boil-resistant |
| PF | Phenol formaldehyde |
| UF | Urea formaldehyde |
| MDF | Medium density fibreboards |
| t. & t. | through and through |

These are suggestions and may not be the same for everyone.

| | |
|---|---|
| plywood | plywd. |
| joinery | jny. |
| chipboard | chpbd. |
| furniture | frntr. |
| carpenter | carptr. |
| veneering | vng |
| manufactured | mftd. |
| laminating | lmtg. |
| carcassing | crcssg. |

## Abbreviating Tree Names

Tree abbreviations – this is one version and you may have slightly different abbreviations.

| | |
|---|---|
| Sycamore | Syc. |
| Douglas Fir | Doug. Fr. |
| Parana Pine | Par. P. |
| European Redwood | Eur. Red. |
| Baltic Whitewood | Bal. Wht. |
| Columbian Pine | Col. P. |
| Western red cedar | W. r. c. |
| Western hemlock | W. hk. |
| African Mahogany | Afr. Mahog. |
| Afromosia | Afrm. |
| Japanese oak | Jap. o. |
| Hickory | Hick. |
| Chestnut | Chstnt. |
| Meranti Lauan | Mer. Ln. |

FACT SHEET UPGRADE CONSTRUCTION

# STUDY SKILLS – ANSWER SHEET 2

## Air Seasoning Passage

This trad. meth. of seasng. timb. takes place in open-sided sheds & exps. timb. to the joint act. of circltg. air & temp. This proc. expels exc. m,. thro. evap. An approp. reduct. in m.c. is a slow proc. & deps. on a. of exp., the type of wd. (H.W. or S.W.), the sp. of wd. & the crs.-sect. size.

## Symbols

∴ therefore = equals
∵ because = minus
+ plus ÷ divided by

1. ∵ of winter weather joinery outdoor work will ↓ in Jan.
2. It will ∴ ↑ in April.
3. → fairly recently walnut was used extensively for furniture.
4. % wood from Indonesia ↑.
5. 90 + 3 = 5 x 6

## Using Letters & Numbers

**Ash**

| | |
|---|---|
| Description | 1. Open grain.<br>2. Not durable.<br>3. Flexibility & springiness. |
| ideal for | a) hammer shafts<br>b) shafts of a cart |
| & also | c) tools<br>d) farm equipment. |

**Walnut**

| | |
|---|---|
| A. Description | 1. Brown, brownish-red.<br>2. Close, fairly hard-textured grain.<br>3. Little prominent marking. |
| B. Qualities | 1. Strong wood.<br>2. Fairly easy to work. |
| C. Used for | 1. Furniture (but less today). |

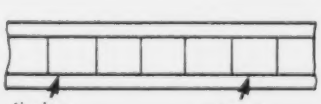
## List

Rule, Pencil, Try Square, Marking gauge, Mortice gauge

## State

**Rebate plane**

## Annotated Sketches




Layers of veneers with grain placed at right angles

Strips of timber with a veneer facing

## Select

Bevel edged chisel

# STUDY SKILLS – ANSWER SHEET 3

## Briefly Explain Difference

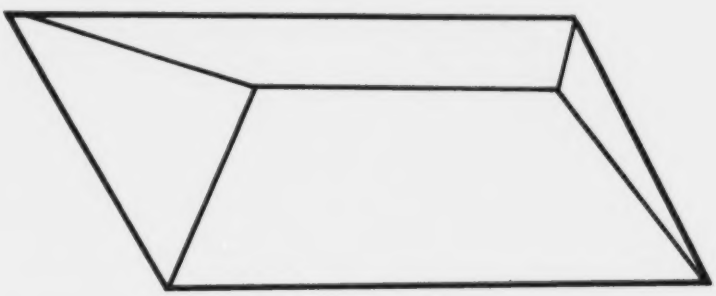
They both cut curves in timber, but because of its design the coping saw is limited to the size or position of the cut.

The coping saw blade is held in a metal frame. The pad saw blade is held in a handle.

## Enumerate

i) check voltage
ii) check wiring
iii) consider any other safety equipment, eg. goggles, dust masks, etc.
iv) always discount tool when changing drill, blade etc.

## Draw



## Describe Procedure

i) place rim lock in position and mark position for keyhole and handle
ii) drill holes as required
iii) cut out recess for edge of lock
iv) screw lock in position
v) fit handle.

## Determine Area

$1 \times 0.620 \times 0.590 = 0.3658$
$2 \times 0.260 \times 0.915 = \underline{0.4758}$
$0.8416$

Answer = 0.8416 $m^2$

FACT SHEET
UPGRADE
CONSTRUCTION

# ACCIDENT REPORT FORM

**1 DATE, TIME AND LOCATION OF ACCIDENT**

4.11.92 /1 0.15 am / Hard outdoor play area.

**2 INJURIES SUSTAINED**

**a) CHILD** Slight burns to back of neck.

**b) STAFF**

**3 NAME, AGE AND ADDRESS OF THOSE SUSTAINING INJURY**

Andrew Cooper, 3 years, 9 Green Close, Rington.

**4 NAME AND ADDRESS OF ANY WITNES TO THE ACCIDENT**

Wendy Smith, 52 Upland Crescent, RIngton.

**5 BRIEF DESCRIPTION OF HOW THE ACCIDENT OCCURRED**

An unknown boy of about 15 threw a lighted firework over the nursery fence and it touched Andrew's neck before going off in an empty part of the play area.

**6 SUMMARY OF FIRST AID RENDERED/ACTION TAKEN**

Andrew's neck was held under cold running water for a few minutes. There was no blistering. A cold compress was applied for 10 minutes after which he returned to play with only a small red mark on his neck. The nursery manager, local police and the headmistress of the secondary school were informed.

Core Skills
C:1·1

Basic Skills Standards
C:10
C:11

# SELF-ASSESSMENT QUESTIONNAIRE

## Writing

Please tick a box.

| | | Please tick | |
|---|---|---|---|
| I know how to use different styles of writing to suit different purposes | | Yes ☐ | No ☐ |
| I feel confident about using punctuation | | Yes ☐ | No ☐ |
| I feel confident about using grammar | | Yes ☐ | No ☐ |
| I know how to write sentences | | Yes ☐ | No ☐ |
| I know how to use a dictionary | | Yes ☐ | No ☐ |
| I know how to increase my vocabulary | | Yes ☐ | No ☐ |
| I feel confident writing about myself | | Yes ☐ | No ☐ |
| I feel confident writing | letters | Yes ☐ | No ☐ |
| | memos | Yes ☐ | No ☐ |
| | CVs | Yes ☐ | No ☐ |
| | forms | Yes ☐ | No ☐ |
| | accident reports | Yes ☐ | No ☐ |
| | order/requisition forms | Yes ☐ | No ☐ |

I require further work on .....

.....

.....

.....

.....

**If you have answered NO to any of these questions then read through the section again or ask a tutor to help you.**

**COMMUNICATION**
**WITHOUT WORDS**

FACT SHEET UPGRADE CONSTRUCTION

# SIGNS & SYMBOLS

## Why are they so useful?

- they attract people's attention
- they need few words to get their message across
- they are international (people of most languages can understand them)
- they are clear.

| | | |
|---|---|---|
| Damen | (German) | Herren |
| Femmes | (French) | Hommes |
| ΓΥΝΑΙΚΩΝ | (Greek) | ΑΝΔΡΩΝ |
| Damer | (Danish) | Herrer |
| Señoras | (Spanish) | Caballeros |

**You might not be able to read these languages but we all recognise the symbols – there would be problems in this case if we didn't!**

| Core Skills |
|---|
| C:1·3 |
| C1·4 |

| Basic Skills Standards |
|---|
| C:2·1 |

TASK SHEET UPGRADE CONSTRUCTION

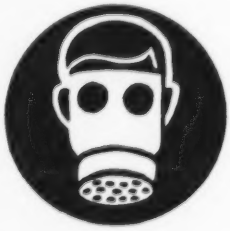
# SIGNS & SYMBOLS

These signs (which are white on a blue background) are **mandatory.**

That means you **must do what they say.**

You **must carry out the action given by the sign.**

**Can you say what these signs mean?**



Core Skills

C:1·4

Basic Skills Standards

C:2·1

FACT SHEET UPGRADE CONSTRUCTION

# USING GRAPHICS TO COMMUNICATE

## Why are graphics so effective?

Graphics are used to give information in terms of **pictures, symbols** or **charts.** They can often present information more **clearly** and **quickly** than by writing alone.

Compare these two examples of the same information presented in different ways. Which would you rather study?

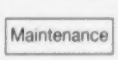
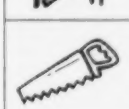
**Deaths at work in the Construction Industry**

Written

More fatal injuries occurred among labourers than in any other occupation during 1989-90. In all, 49 labourers died during the course of their work. The next highest group was maintenance personnel, with 29 fatalities. The construction industry also ranked high on the list, with roof workers being most at risk, with 10 deaths. Bricklayers suffered four fatalities, steel erectors 3, as did **carpenters** & **joiners.** Electricians were another high risk category, with 10 deaths among this group ...

Table

Deaths at Work 1989-90

| | | |
|---|---|---|
| | 49 | Labourers |
|   | 29 | Maintenance personnel |
| | 10 | Roof workers |
| | 10 | Electricians |
| | 4 | Bricklayers |
| | 3 | Steel erectors |
|  | 3 | Carpenters & Joiners |

**Remember**

**Graphics** get the message across with **few** words or **no** words at all.

| Core Skills |
|---|
| C:1·3 |
| N:1·3 |

| Basic Skills Standards |
|---|
| N:7·1 |

# CHARTS/GRAPHS

**Apart from tables we can also use charts to present information.**

There are different kinds.

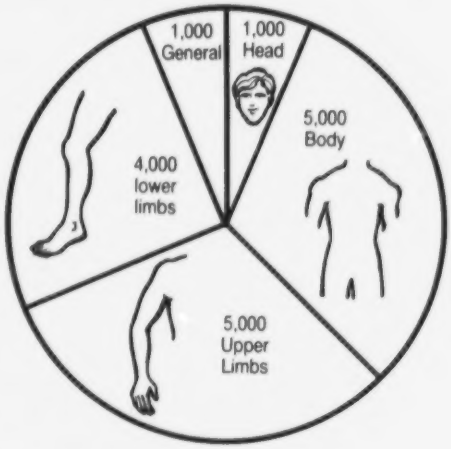
## Pie Chart

**Each piece of information is shown as a section of the circle, like a piece of pie. The area taken up by each section is worked out as a percentage of the circle.**

Look at this information:

| Injuries in Construction (rounded to nearest 1,000) | |
|---|---|
| Head | 1,000 |
| Body (torso) | 5,000 |
| Upper limbs | 5,000 |
| Lower limbs | 4,000 |
| General/unspecified | 1,000 |

Presented in a Pie Chart




(the area of the circle represents the total figure involved and each slice gives an approximate idea of distributions)

Remember → **Charts & graphs** can be produced easily using computer packages.

| Core Skills |
|---|
| C:1·3 |
| N:1·3 |

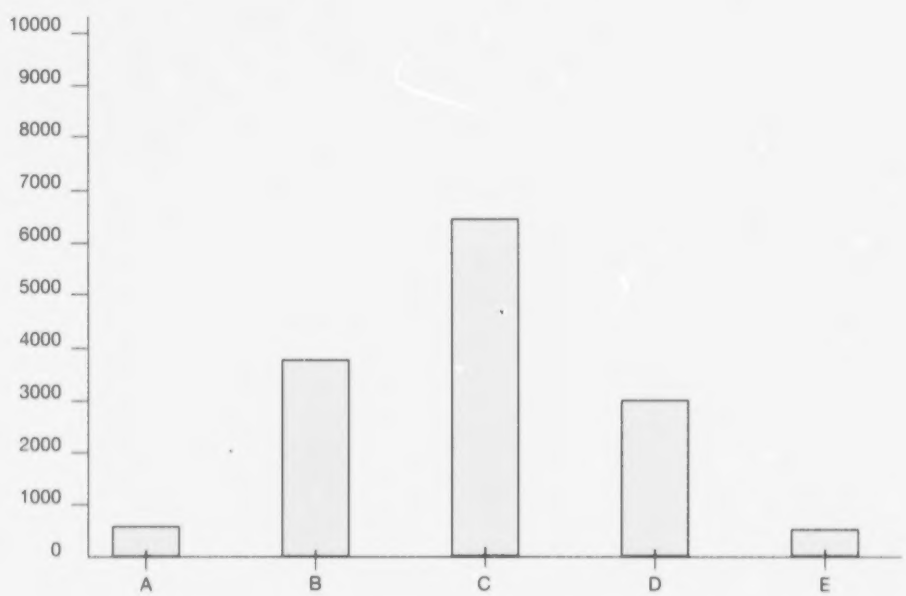
| Basic Skills Standards |
|---|
| N:13·1 |
| N:13·2 |

## Bar Chart

**Each piece of information is shown as a column or bar. The length of the bar varies according to the figure it represents.**

Look at this information:

| Kind of Accident (Construction) | Figures | rounded off to nearest 500 |
|---|---|---|
| Contact with moving machinery | 337 | 500 |
| Struck by moving/flying/falling objects | 3,711 | 3,500 |
| Handling, lifting, carrying injuries | 6,518 | 6,500 |
| Falls, slips, trips | 3,091 | 3,000 |
| Exposure to contact with harmful substance | 363 | 400 |




KEY

A Contact with moving machinery
B Struck by moving/flying/falling objects
C Handling, lifting, carrying injuries
D Falls, slips, trips
E Exposure to contact with harmful substance

| Core Skills |
|---|
| C:1·3 |
| N:1·3 |

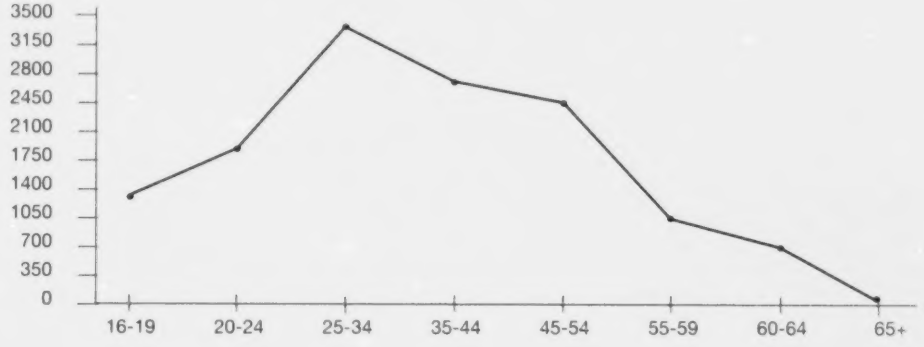
| Basic Skills Standards |
|---|
| N:1·3 |
| N:13·1 |

## Line Graphs

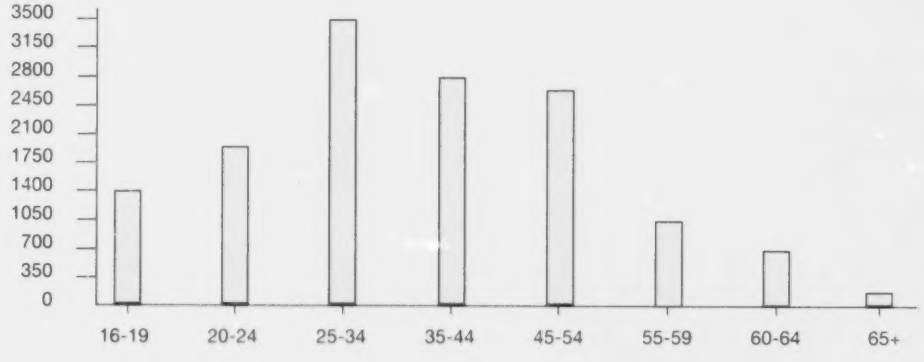
**Line graphs are useful for showing how one piece of information relates to another, for example, progression (rise or fall) over a period of time.**

Look at this information:

| Age distribution in major injuries in the Construction Industry | |
|---|---|
| Age | Injuries |
| 16-19 | 1324 |
| 20-24 | 1880 |
| 25-34 | 3323 |
| 35-44 | 2715 |
| 45-54 | 2436 |
| 55-59 | 1002 |
| 60-64 | 644 |
| 65+ | 70 |




OR




| Core Skills |
|---|
| C:1·3 |
| N:1·3 |

| Basic Skills Standards |
|---|
| N:13·1 |
| N:13·2 |

## Major causes of accidents in the Construction Industry

- **Present this information in a chart or graph.**

Falls of persons from heights was recorded as 28% of all accidents. Handling goods was responsible for 26% and lifting equipment, machinery and transport accidents accounted for 12%. Using handtools was responsible for 7%, falls of materials for 8%, stepping on or striking against objects was 9% and other causes was recorded as 10%.

Graph/chart

TASK SHEET UPGRADE CONSTRUCTION

# CHARTS/GRAPHS

**This table shows the number of fatal accidents in the Construction Industry**

| Year | No. of deaths |
|---|---|
| 1966 | 288 |
| 1967 | 195 |
| 1968 | 238 |
| 1969 | 265 |
| 1970 | 203 |
| 1971 | 196 |
| 1972 | 190 |
| 1973 | 230 |

- Show these figures in a graph.



| Core Skills |
|---|
| C:3·3 |
| N:1·3 |

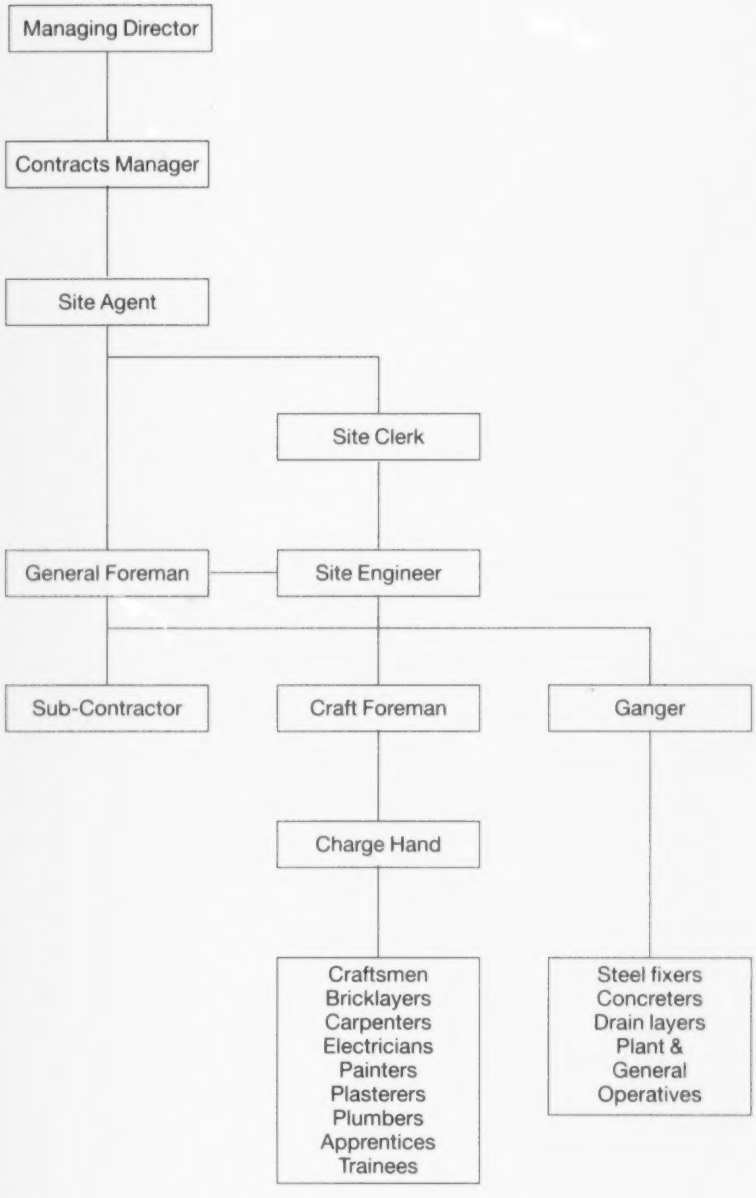
| Basic Skills Standards |
|---|
| N:13·4 |

FACT SHEET
UPGRADE
CONSTRUCTION

# CHARTS/GRAPHS

A chart is useful to show the **structure** or **organisation** of a **firm.**

This is just one part of a building contractor's organisation and structure.




- **Show the structure of your firm in a chart**

Core Skills
C:1·4

Basic Skills Standards
C:2·3

TASK SHEET UPGRADE CONSTRUCTION

# MAP EXERCISE

**Using the map on the following page, answer these questions. Use an atlas to help you.**

1 List of softwoods grown in Canada and USA.

2 List of hardwoods grown in USA.

3 Name the softwoods grown in Europe.

4 Name the softwoods grown in Brazil.

5 Name the timber grown in East Africa.

6 Name 4 hardwoods grown in West Africa.

7 State 3 hardwoods grown in Europe.

8 Name a hardwood grown in Burma.

9 State timbers grown in Indonesia.

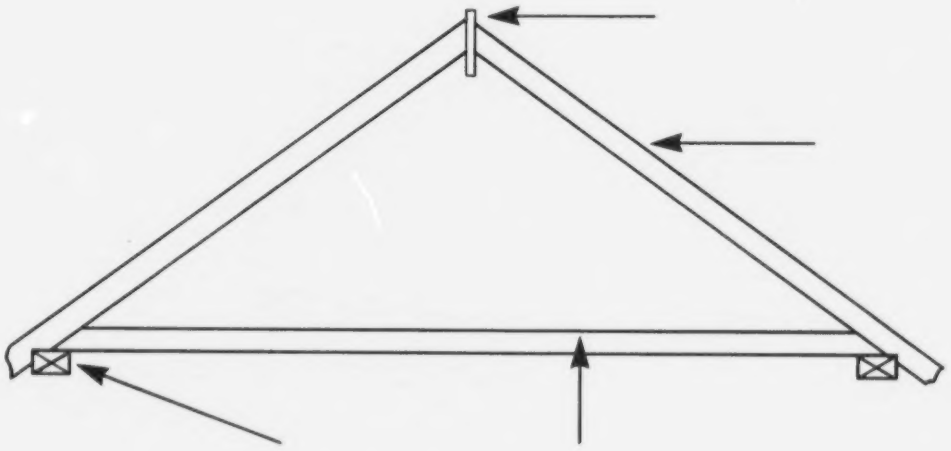
10 Name the timbers grown in Japan.

## Areas of timber production

TASK SHEET UPGRADE CONSTRUCTION

# DIAGRAMS

It is often easier to describe something by drawing a diagram or making a quick sketch, for example, a section through a traditional roof as shown here:



- Try to name each part (choose from these:)

| | | |
|---|---|---|
| purlin | ridge | binder |
| hip rafter | hanger | jack rafter |
| wallplate | ceiling joist | common rafter |

FACT SHEET UPGRADE CONSTRUCTION

# INTRODUCING DRAWING TECHNIQUES

## Why do you need drawing techniques?

When you are a qualified joiner you will work from drawings. There are many first class tradesmen who cannot read drawings and this is a great disadvantage to them.

If you go to study to a higher level NVQ you will be required to do drawings to architect standards.

So it is very important to develop a technique of drawing and your own style. Remember: drawings can be recognised just as handwriting can be recognised.

## What do you need to start?

**2H pencil** (anything softer will rub off as you move the T-square across the page)

**3H pencil** (you may need this for drawing fine lines but don't press on too hard or you will make an indentation in the paper and you won't be able to rub it out)

**Drawing board, T-square, paper**

## How do you start?

Clip the drawing sheet to the drawing board and get your T-square.

Draw a margin around the sheet: on A0, A1 paper the minimum width should be 20mm and on A2, A3, A4 the minimum width should be 10mm.

**Title strip:** this can either be a box at the bottom of the drawing paper although this can be a disadvantage because the rectangular shape of the paper is lost OR it can be a strip running along the bottom of the paper above the margin.

Look at this example:

| Class | Subject | Title | Name | Date | Mark |
|---|---|---|---|---|---|
| BPCJIC | ASSOCIATED SUBJECTS | Introduction to Drawing Office Practice | B Smith | 5.1.90 | 9 |

You do not put the headings for eg: subject, title etc. on your own title strip – they are just shown as examples.

FACT SHEET
UPGRADE
CONSTRUCTION

# PRINTING

Make sure you draw a line to rest on or your printing will not be neat. The maximum height of printing in the title strip would be 6mm, but in the actual drawing the printing could be as small as 3mm or even 2mm.

**Look** at these examples of different printing. **Make sure** your drawing is neat and worth looking at.

| | |
|---|---|
| DRAWING | tall and narrow |
| DRAWING | stretch it out |
| D R A W I N G | widely spaced |
| DRAWING | a fancy style to distinguish you from anyone else |
| *DRAWING* | a fancy stroke to distinguish you from anyone else |

If you require more information on any aspect of drawing office practice then consult the Drawing Office Practice British Standard Document (BS 1192) which will give you all the information you need on how to set out a drawing.

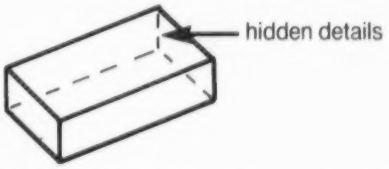
FACT SHEET UPGRADE CONSTRUCTION

# TYPES OF LINES

**Construction lines** – lines which aid in the construction of a drawing.

**Finished lines** – show the finished outline of the drawing.

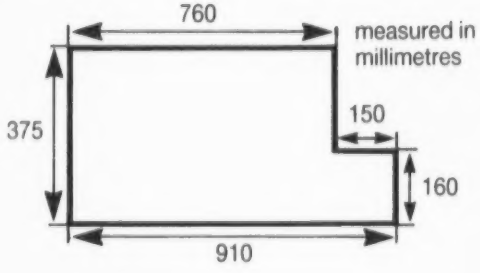
**Hidden details lines** – are lines which are not normally in the view shown.




**Centre lines** – indicate the centre of an object (ie centre of a circle).

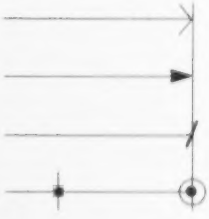
**Broken lines** – you might not be able to get all the detail on a drawing or you may not need to show a particular section.

**Dimension lines** show how a drawing is dimensioned (measurements inserted). Dimension lines should be continuous. Measurements are placed above these lines.




## Indication Dimension Lines

### Arrowheads



Open arrowhead

Closed arrowhead

Oblique stroke

Dots or circles

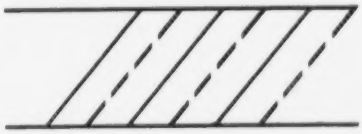
Any of these may be used but arrowheads are preferred for general use. It is a matter of opinion whether you use the open arrowhead or the Short but don't make the head too big.

FACT SHEET UPGRADE CONSTRUCTION

# HATCHINGS

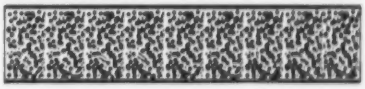
**Blockwork**

**Stonework**

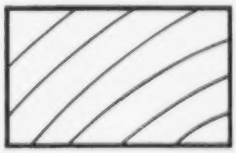


**Brickwork**

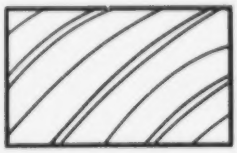
**Plaster/rendering**



**Timber**



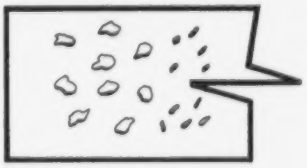
**Softwood planed all round (P.A.R.)**



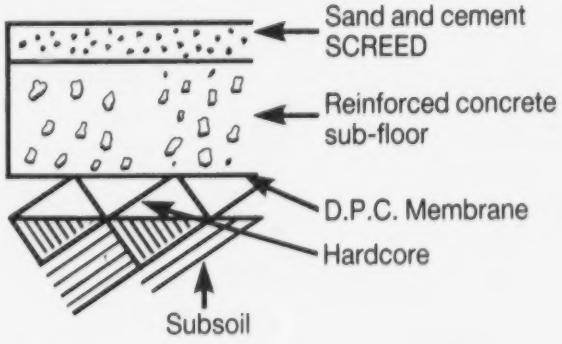
**Hardwood P.A.R.**

**Any sawn timber**

**NB. WROT TIMBER means planed timber**



Concrete



# DRAWING PRACTICE

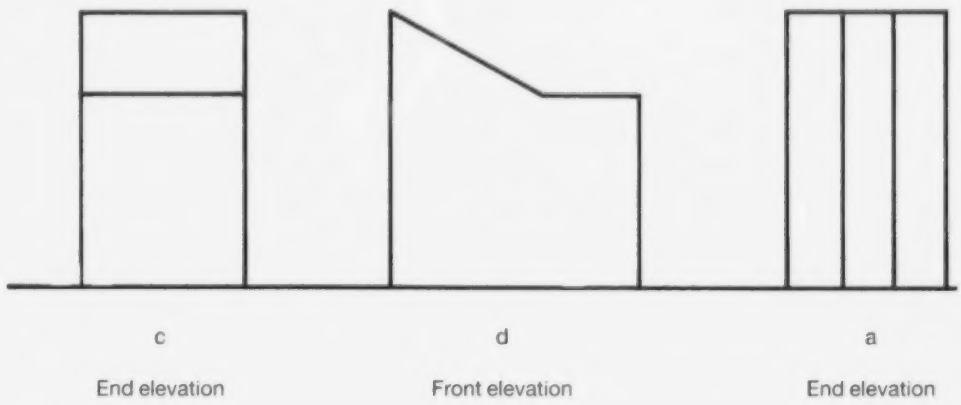
**B.S. 1192** details the standard procedure adopted by architects and builders when producing drawing.

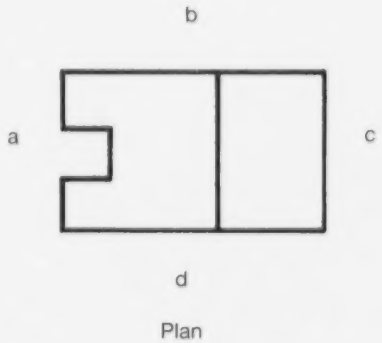
## Orthographic Projection

This method of drawing is used to illustrate the various views of a building and their arrangement with each other.

**First Angle** – This form of orthographic projection is shown below (Fig. 1). Here we see that the plan view of the object is placed directly below the front elevation and the side elevations placed at the opposite end to which they refer.

Fig. 1

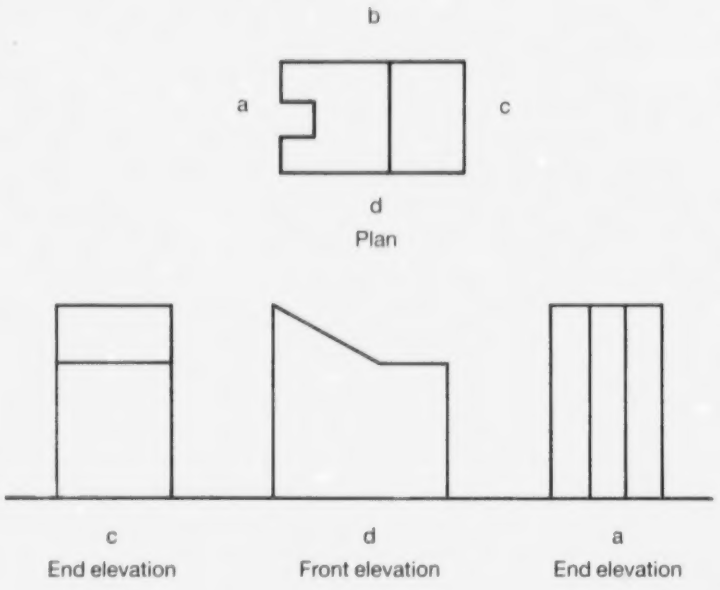


# DRAWING PRACTICE

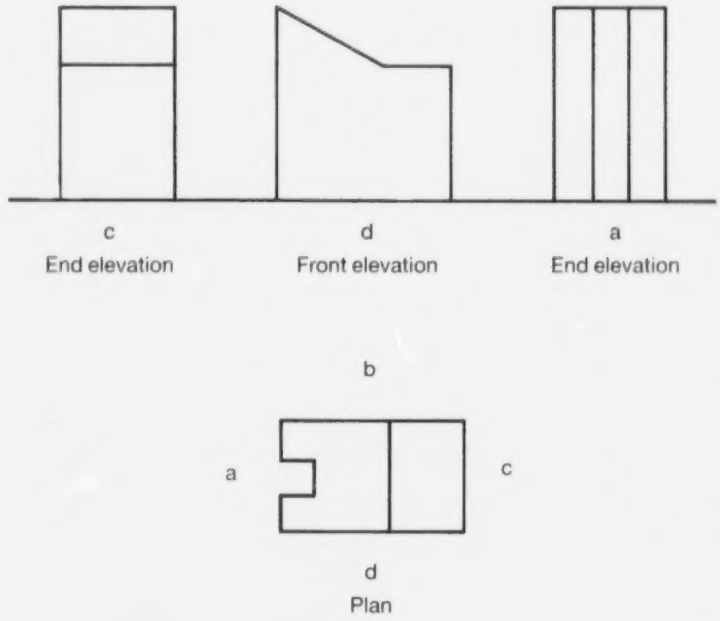
**Third Angle** – In this angle (Fig. 2) we see the plan placed above the elvations with the side elevations placed adjacent to the sides to which they refer.

Fig. 2




**Combined 1st & 3rd** – This method (Fig. 3) is favoured by many because it combines better method of the arrangements of elevations (third angle) with the plan placed below (first angle).

Fig. 3



FACT SHEET UPGRADE CONSTRUCTION

# PICTORIAL PROJECTION

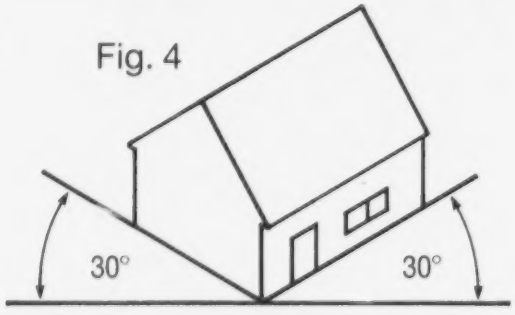
**Pictorial Projection** – This is a method of producing drawings in three dimensions. The main types of drawings are isometric, oblique and axonometric.

**Isometric** – This is the type of projection which is most used and follows the general principle that all vertical lines remain vertical while all horizontal lines are drawn at 30 degrees (Fig. 4).

**Oblique** – In this type of projection the front view is drawn as a normal elevation with the depth projected at either 45 degrees or 30 degrees. To avoid producing a distorted view the depth measurement can be reduced to ½ or ⅔ of the original size (Fig. 5).

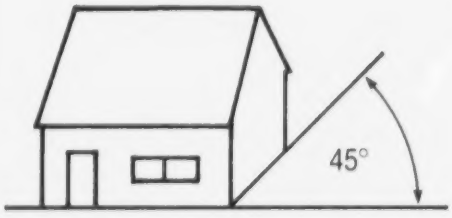
**Axonometric** – This form of projection is most suitable for pictorial views of plans and interior for pictorial views of plans and interiors because the plan of the object is drawn true to size. The angles used in projection are either 45 degrees and 45 degrees or 30 degrees and 60 degrees. True measurements can be taken from lines which were originally horizontal or vertical (Fig. 6).

Fig. 4



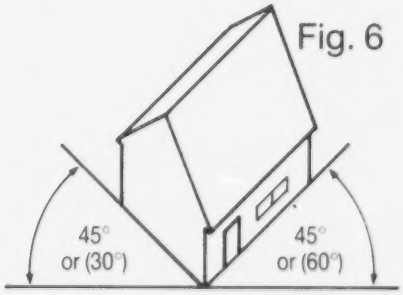

Isometric projection

Fig. 5




Oblique projection

Fig. 6

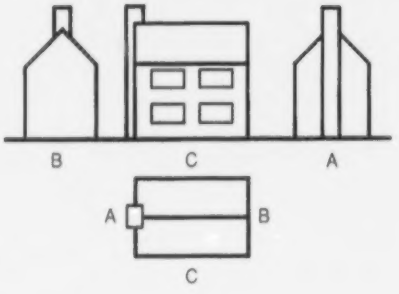


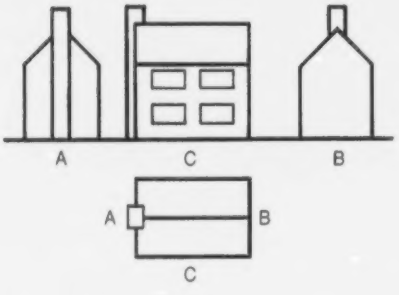

Axonometric projection

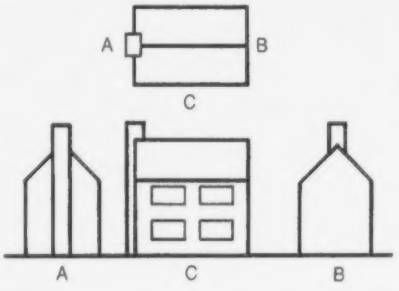
TASK SHEET UPGRADE CONSTRUCTION

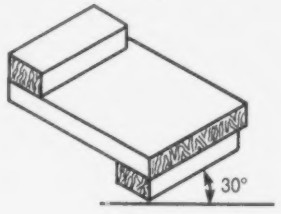
# DRAWING PRACTICE

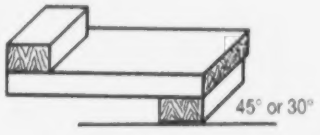
The illustrations below show the various methods used to draw objects: oblique, isometric, etc. by architects and builders. Complete the drawing by inserting the name of each type on the line provided.

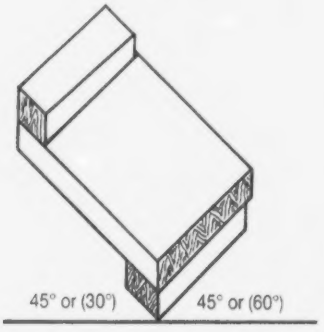




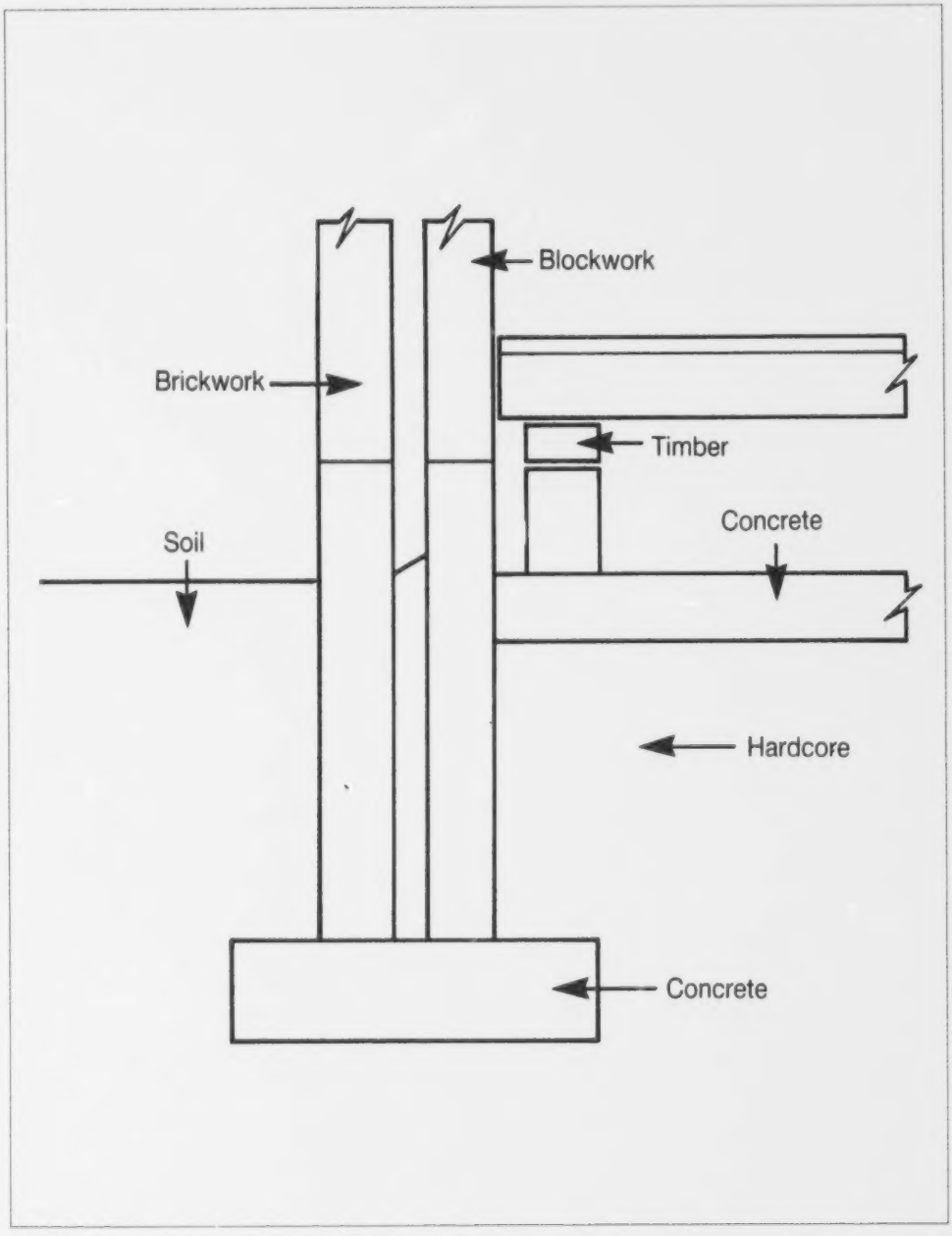

Core Skills
C:2·3

TASK SHEET UPGRADE CONSTRUCTION

# DRAWING PRACTICE

The drawing below shows a section through part of a building.

Place on the drawing the correct hatching for the materials indicated.



FACT SHEET
UPGRADE
CONSTRUCTION

# FREEHAND SKETCHING

A large amount of the communication process, which occurs in workshops or on site in the Construction Industry, is carried out by means of sketching.

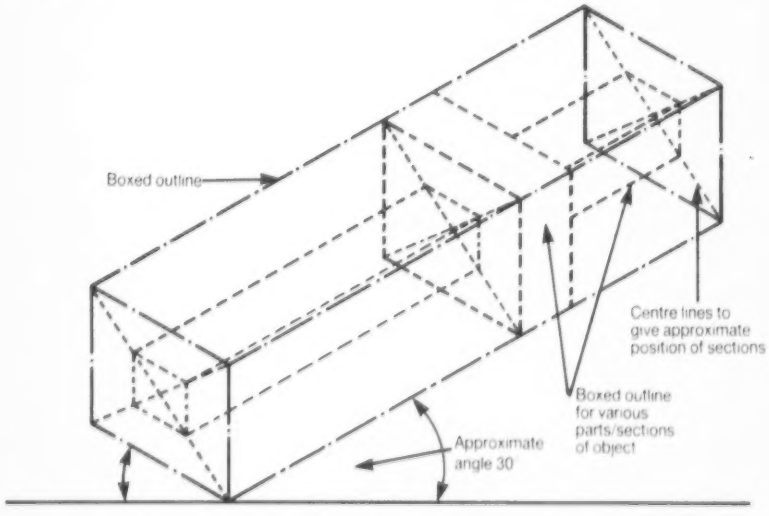
There are many occasions when details of work need to be passed on between workers in the easiest way is to use a **sketch.** This **sketch** does not have to be an 'artistic work' but can be a **simple outline** in **pictorial form** to get over a point.

Many students will find sketching comes naturally and there are a number who will possess an artistic flair. Others, however, find great difficulty in communicating in this way.

The technique used in producing good freehand sketches can be adapted from the pictorial form of drawing known as 'isometric projection'. This form of drawing views objects from one corner with the object tilted at 30 degrees. Using this information we quickly produce sketches of a decent quality.

The following drawings illustrate the technique in two stages used to sketch a mortice gauge.

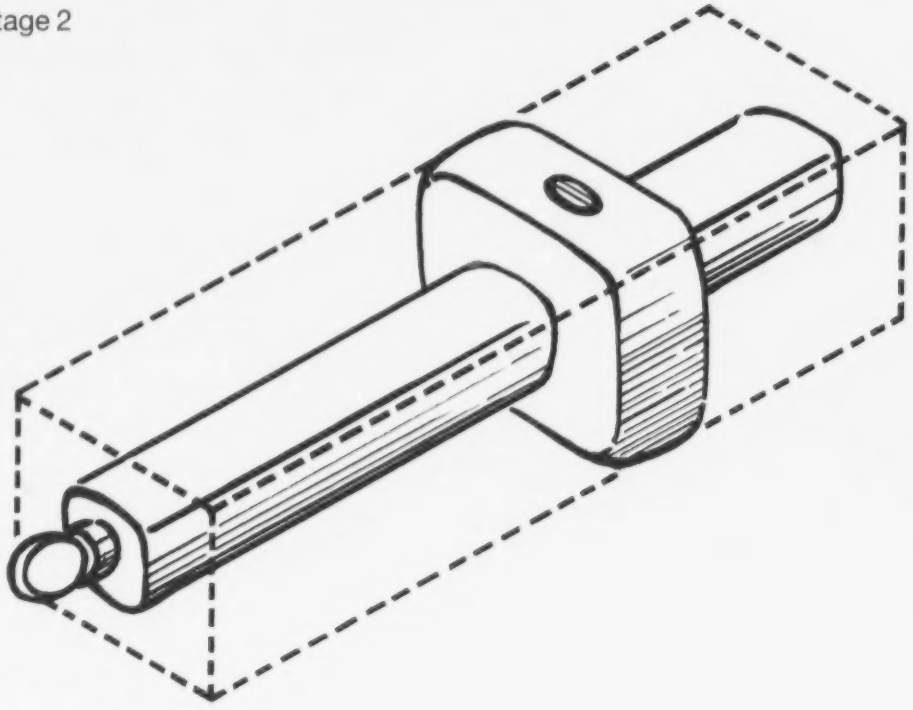
**Stage 1**
We can see here that a boxed outline of the object's overall dimensions has been drawn. We can also construct the outline for the various components. Not all details need to be sketched at this stage, the object being to obtain a general layout and perspective of our mortice gauge.


Boxed outline
Centre lines to give approximate position of sections
Boxed outline for various parts/sections of object
Approximate angle 30

# FREEHAND SKETCHING

**Stage 2**
We can now proceed with the filling in of details using light pencil work. We can round corners, shade in, place in more detail, etc. to obtain our finished work.

Stage 2



- **Using the technique described sketch one item from the following list:**

1) Screwdriver
2) Chisel
3) T-square
4) Claw hammer.

**If you are unsure about the appearance of any of these items, go to the workshops or consult your supervisor.**

# SELF-ASSESSMENT QUESTIONNAIRE

## Communication without words

Please tick a box.

| | Please tick | | | |
|---|---|---|---|---|
| I understand the value of signs and symbols | Yes | | No | |
| I can present information clearly using: | | | | |
| pie charts | Yes | | No | |
| bar charts | Yes | | No | |
| line graphs | Yes | | No | |
| flow charts | Yes | | No | |
| diagrams | Yes | | No | |
| posters | Yes | | No | |
| I understand the importance of body language | Yes | | No | |
| I feel confident about technical drawing | Yes | | No | |
| I feel confident about freehand sketching | Yes | | No | |

I require further work on .....

**If you have answered NO to any of these questions then read through this section again or ask your tutor to help you.**

APPLICATION
OF NUMBER

TASK SHEET
UPGRADE
CONSTRUCTION

# WHEN DO YOU USE NUMBER SKILLS IN EVERYDAY LIFE?

Money –
buying, saving etc.
borrowing,
writing cheques
settling bills

Card games

Using a calculator

Football pools

Snooker

Playing darts

Driving a car

Using a credit card
ACCESS, VISA etc.

Clocks
digital clocks (24 hour)

Setting videos

Adding VAT to prices

Buying goods in a sale

Filling a car with petrol (litres)

Checking temperature
(child, oven, greenhouse)

Working out measurements for
curtains, carpets and floor coverings,
wallpaper etc.

Comparing prices in a
shop/supermarket

Mileage

Budgeting

Working out 10% service charge

Tickets 2 for the price of 1

Cooking (quantities)

Organising a trip out – 10% off
for 10 bookings

Think about when you have used **number skills** today:

# IMPROVE YOUR CONCENTRATION

Look at these series of numbers.

Read one line to yourself.
Then close your eyes and repeat the numbers.

How long a series can you hold in your mind?

**2 6 1 9 3**

**5 8 7 2 5 1**

**1 6 3 8 8 0 2**

**7 4 8 0 4 3 6 1**

**3 5 7 4 8 1 2 3 6**

**1 2 5 1 9 7 5 2 8 1 1 8 7 6**

**It helps if you can make an association – make it real for you for example in the last series of numbers – someone's birthday may be 12.5.1975. Your door number may be 28 etc.**

**Practise each day.
Your concentration span will improve.**

FACT SHEET
UPGRADE
CONSTRUCTION

# 24 HOUR CLOCK

## When is it used?

- timetables, army, railway stations, airports

## Why is it used?

- to avoid confusion between time **am** and time **pm**

Time to midday is written as normal but a 0 is put in front so
**8 am becomes 08.00**

| | | | |
|---|---|---|---|
| this happens only up to then | 9 am | – | **09.00** |
| | 10 am | – | **10.00** |
| | 11 am | – | **11.00** |
| | 12 noon | – | **12.00** |
| continue counting from here | 1 pm | – | **13.00** |
| | 2 pm | – | **14.00** |
| | 3 pm | – | **15.00** |
| (an easy way to do it is to add 12 to this number so 4 + 12 = 16) | 4 pm | – | **16.00** |

When we use these times in speech we say:–

- The next plane for Majorca leaves at **fifteen hundred** hours.
- The train for Edinburgh leaves at **seventeen hundred** hours.

Add minutes in the normal way – 14.05 (5 past 2)
Add minutes in the normal way – 19.15 (¼ past 7)

| Core Skills |
|---|
| N:1·2 |

| Basic Skills Standards |
|---|
| N:2·4 |
| N:5·1 |
| N:5·2 |

TASK SHEET UPGRADE CONSTRUCTION

# 24 HOUR CLOCK

Study these examples then do the tasks:

| | | |
|---|---|---|
| 1.30 pm | = | 13.30 |
| 4.10 pm | = | 16.10 |
| 9.05 pm | = | 21.05 |
| 12.15 am | = | 00.15 |

**Write out these using the 24 hour clock:**

| | |
|---|---|
| 10.45 am | = |
| 12.35 pm | = |
| 1.50 pm | = |
| 3.20 pm | = |
| 5.16 pm | = |
| 6.05 pm | = |
| 8.29 pm | = |
| 10.01 pm | = |
| 12.00 midnight | = |
| 12.30 am | = |

**Convert back from the 24 hour clock:**

| | |
|---|---|
| 18.15 | = |
| 13.05 | = |
| 22.05 | = |
| 00.07 | = |
| 16.50 | = |
| 14.45 | = |
| 20.55 | = |
| 15.02 | = |
| 23.50 | = |
| 17.10 | = |

| Core Skills |
|---|
| N:1·2 |

| Basic Skills Standards |
|---|
| N:2·4 |
| N:5·1 |
| N:5·2 |

# ADDITION

- **Simple addition**

Add the units together, then the tens.
**Look at these examples:**

| tens | units |
|---|---|
| 1 | 6 |
| +2 | 2 |
| 3 | 8 |

| t | u |
|---|---|
| 2 | 5 |
| +3 | 4 |
| 5 | 9 |

| t | u |
|---|---|
| 4 | 4 |
| +5 | 2 |
| 9 | 6 |

| t | u |
|---|---|
| 3 | 6 |
| +4 | 3 |
| 7 | 9 |

| t | u |
|---|---|
| 5 | 2 |
| +3 | 7 |
| 8 | 9 |

- **What if the units add up to 10 or more?**
We then carry 1 ten over to the tens column and leave the units in the unit column.

eg.
$$\begin{array}{r} 2\ 9 \\ +5\ 3 \\ \hline 8\ 2 \\ \hline {\scriptstyle 1} \end{array}$$

Units 9 + 3 = 12 (1 ten, 2 units)
carry 1 ten over.
Remember to add it in.

More examples:

$$\begin{array}{r} 6\ 5 \\ +2\ 8 \\ \hline 9\ 3 \\ \hline {\scriptstyle 1} \end{array} \qquad \begin{array}{r} 5\ 7 \\ +1\ 4 \\ \hline 7\ 1 \\ \hline {\scriptstyle 1} \end{array} \qquad \begin{array}{r} 4\ 8 \\ +3\ 6 \\ \hline 8\ 4 \\ \hline {\scriptstyle 1} \end{array} \qquad \begin{array}{r} 3\ 8 \\ +2\ 7 \\ \hline 6\ 5 \\ \hline {\scriptstyle 1} \end{array}$$

$$\begin{array}{r} 2\ 9 \\ +3\ 6 \\ \hline \\ \hline \end{array} \qquad \begin{array}{r} 1\ 8 \\ +1\ 9 \\ \hline \\ \hline \end{array} \qquad \begin{array}{r} 3\ 7 \\ +1\ 4 \\ \hline \\ \hline \end{array} \qquad \begin{array}{r} 4\ 6 \\ +2\ 6 \\ \hline \\ \hline \end{array} \qquad \begin{array}{r} 6\ 5 \\ +1\ 5 \\ \hline \\ \hline \end{array}$$

**The tens carry over in the same way into the hundreds:**

eg.
$$\begin{array}{r} 8\ 2 \\ +\ 3\ 5 \\ \hline \mathbf{1}\ 1\ 7 \\ \hline \end{array}$$

Carry the **1** over into the hundreds leave the 1 ten behind

$$\begin{array}{r} 7\ 8 \\ +\ 4\ 2 \\ \hline \\ \hline \end{array} \qquad \begin{array}{r} 9\ 9 \\ +\ 1\ 0 \\ \hline \\ \hline \end{array} \qquad \begin{array}{r} 8\ 5 \\ +\ 2\ 6 \\ \hline \\ \hline \end{array} \qquad \begin{array}{r} 6\ 4 \\ +\ 5\ 3 \\ \hline \\ \hline \end{array} \qquad \begin{array}{r} 4\ 9 \\ +\ 5\ 7 \\ \hline \\ \hline \end{array}$$

# SUBTRACTION

- **Simple subtraction**

**Look at this example:**

tens units

```
  2  5
 -1  3
  1  2
```

3 from 5 is 2
1 from 2 is 1
Check your answer by adding 12 to 13 = 25

```
  5  9      8  8      6  7      7  6      9  9
 -3  7     -4  5     -2  4     -5  2     -7  3
 ____      ____      ____      ____      ____
```

- **What happens if the unit you are taking away is greater than the unit you are taking it from?**

eg. 56 5 — 8 is greater than 5 — (65 is 6 tens & 5 units
−2 8 — 1 from 2 is 1 — 28 is 2 tens & 8 units)
3 7 — What do we do?
We borrow 10 from 60 (1 ten from 6 tens = 5 tens)
65 becomes 50 and 15

By adding one ten to 5 units we have 15

15 − 8 = 7
5 − 2 = 3 Answer = 37

```
  5  3      6  4      4  4      2  8      9  2
 -1  6     -3  5     -2  7     -1  9     -6  8
 ____      ____      ____      ____      ____
```

TASK SHEET UPGRADE CONSTRUCTION

# MULTIPLICATION TABLES

| | 2x table | 3x table | 4x table | 5x table | 6x table | 7x table | 8x table | 9x table | 10x table |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 |
| 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 |
| 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 | 40 |
| 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 |
| 6 | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 | 60 |
| 7 | 14 | 21 | 28 | 35 | 42 | 49 | 56 | 63 | 70 |
| 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 | 80 |
| 9 | 18 | 27 | 36 | 45 | 54 | 63 | 72 | 81 | 90 |
| 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |

**How to use the table**

Find the number along the top line and the number required down the left side. Move your finger across until it comes to the column which has the top line number in it eg. **6 x 5 =30**

- **Practise using the table:**

| | | | | | |
|---|---|---|---|---|---|
| 1 | 9 x 7 = | | 6 | 6 x 7 = | |
| 2 | 7 x 5 = | | 7 | 5 x 4 = | |
| 3 | 8 x 6 = | | 8 | 7 x 8 = | |
| 4 | 5 x 9 = | | 9 | 8 x 10 = | |
| 5 | 9 x 9 = | | 10 | 6 x 9 = | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **20** | **is** | 10 x 2 | **or** | 2 x 10 | **or** | 4 x 5 | **or** | 5 x 4 | |
| **72** | is | __ x __ | or | __ x __ | | | | | |
| **54** | is | __ x __ | or | __ x __ | | | | | |
| **40** | is | __ x __ | or | __ x __ | or | __ x __ | or | __ x __ | |
| **30** | is | __ x __ | or | __ x __ | or | __ x __ | or | __ x __ | |

# MULTIPLICATION

Use the multiplication table when multiplying by up to 10.

This is how you multiply by **more** than 10.

**Example** Let's multiply 13 by 12

```
  1 3
 x1 2
 ----
  2 6      First multiply 13 x 2 = 26
1 3 0      Add 0 and then multiply 13 x 1 = 13
-----
1 5 6      Add both answers together
```

Look at one more example:

```
  7 2        7 2        7 2
 x1 3        1 3        1 3
 ---        ---        ---
2 1 6      2 1 6              2 1 6
7 2 0                  7 2 0 +7 2 0
-----                        -----
9 3 6                        9 3 6
```

```
  6 3        4 8        3 7        5 2        7 9
 x1 4       x1 8       x1 6       x1 5       x2 1
 ---        ---        ---        ---        ---

 ____       ____       ____       ____       ____
```

**What do you do when multiplying by more than 100?**
Follow the same procedure as above.
Look at this example:

```
    2 4 1
   x1 1 2
   -----
    4 8 2      First multiply 241 x 2 = 482
  2 4 1 0      Add 0 and then multiply 241 x 1 = 241
2 4 1 0 0      Add 00 and then multiply 241 x 1 = 241
---------
2 6 9 9 2      Add the three answers together
```

**Have a go at these:**

```
  3 6 2      2 6 3      4 5 4      5 3 7      1 6 5
 x1 2 5     x1 3 4     x2 1 6     x3 4 2     x4 2 3
 -------    -------    -------    -------    -------

 _______    _______    _______    _______    _______
```

TASK SHEET
UPGRADE
CONSTRUCTION

# DIVISION

**Exarnple of long division**

We're going to divide 286 by 13:

13) 286 How many 13s are there in 286?
You could have a guess

or you could do it this way:-

13) 286 13 into 2 won't go

2
13) 286 so we try 13 into 28
26 we know 2 x 13 = 26. Then take 26 from 28
26 and that leaves 2
bring down the 6

22
13) 286
26
26 13 into 26 goes 2 with none remaining

**Answer:** **286 ÷ 13 = 22**

- **Have a go at these:**

**1.** 14) 168 **2.** 15) 405 **3.** 11) 242

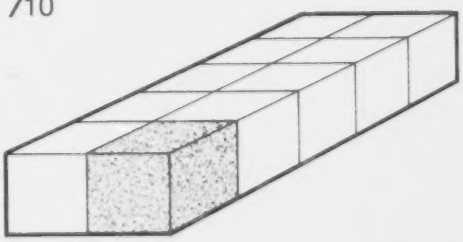
**4.** 16) 672 **5.** 13) 429

FACT SHEET UPGRADE CONSTRUCTION

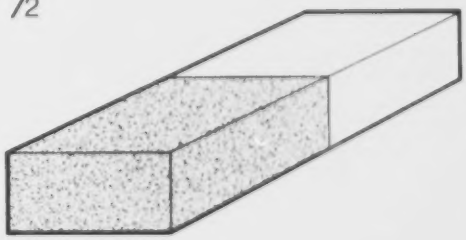
# FRACTIONS & DECIMALS

| **Fractions**<br>Parts of a whole | **Decimals**<br>Number shown in tenths |
|---|---|
| $\frac{1}{10}$ | 0.1 |
| $\frac{1}{100}$ | 0.01 |
| $\frac{1}{1000}$ | 0.001 |
| $\frac{1}{4}$ | 0.25 |
| $\frac{1}{2}$ | 0.50 |
| $\frac{3}{4}$ | 0.75 |
| $\frac{1}{8}$ | 0.125 |
| $\frac{1}{16}$ | 0.0625 |
| $\frac{1}{32}$ | 0.03125 |
| $\frac{1}{3}$ | 0.333 |
| $\frac{2}{3}$ | 0.666 |

1/10



1/2

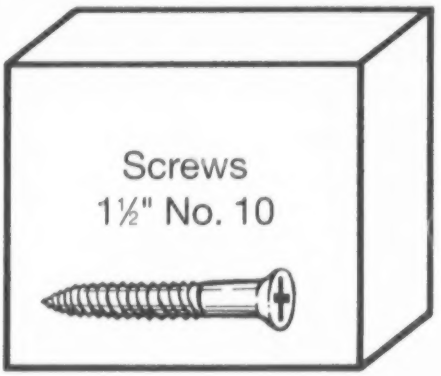


| Core Skills |
|---|
| N:1·2 |

| Basic Skills Standards |
|---|
| N:14·1 |
| N:15·2 |

TASK SHEET UPGRADE CONSTRUCTION

# FRACTIONS & DECIMALS




A quantity of 200 boxes of 1½" No 10 screws were purchased for a site.

a) ½ of this quantity would be required for one specific job.
How many boxes would that be?:

**Answer:**

Now convert your answer to decimals: ½ =

b) Of the remainder ¼ is required for the workshop.
How many boxes would that be?:

**Answer:**

Now convert your answer to decimals: ¼ =

c) Of the remainder ⅗ are to be kept in stock.
How many boxes would that be?:

**Answer:**

Now convert your answer to decimals: ⅗ =

FACT SHEET UPGRADE CONSTRUCTION

# SIGNIFICANT FIGURES

**Look at this example:**

The number 48.29 is correct to decimal places but is also correct to 4 significant figures as the number contains 4 figures.

**Follow this rule** – if the figure to be discarded is 5 or more the preceeding figure is increased by 1.

| | | | |
|---|---|---|---|
| **Look at this example:** | | 5.2835 | |
| | = | 5.284 | (correct to **4** significant figures) |
| | = | 5.28 | (correct to **3** significant figures) |
| | = | 5.3 | (correct to **2** significant figures) |

Remember to keep zeros to show the position of the decimal point or to show that the zero is a significant figure.

| | | | |
|---|---|---|---|
| 14.692 | = | 14.69 | (correct to **4** significant figures) |
| | = | 14.7 | (correct to **3** significant figures) |
| 0.0468 | = | 0.047 | (correct to **2** significant figures) |
| 765.903 | = | 765.90 | (correct to **5** significant figures) |
| | = | 766 | (correct to **3** significant sigures) |

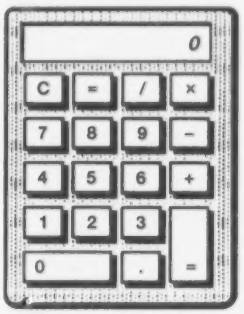
Write down the following numbers correct to the number of significant figures indicated:

| | | |
|---|---|---|
| 1. | 54.97591 | a) to 6<br>b) to 4<br>c) to 2 |
| 2. | 0.0094582 | a) to 4<br>b) to 3<br>c) to 2 |
| 3. | 31.976 | to 2 |
| 4. | 8.1039 | to 3 |
| 5. | 4.14867 | a) to 5<br>b) to 4<br>c) to 3 |
| 6. | 79.397628 | a) to 5<br>b) to 2 |

FACT SHEET
UPGRADE
CONSTRUCTION

# LEARN HOW TO USE A CALCULATOR

When using a calculator it is a good idea to set out all the stages of your calculation on paper. It's easy for you to check your work and easy for someone else to check your method.




It is easy to make mistakes by pressing wrong buttons, so apart from being very careful not to do that it's a good idea to have an idea of the size of answer expected.

How to do this? **Do a rough check** – then you can spot any mistakes.

**Look at this example** – and do a rough check on the following calculation:

$$6.94 \times 5.8 = 40.252$$

round the numbers up or down in order to carry out the check in this way:–

$$7 \times 6 = 42$$

**40.252** is in the region of the calculated answer of 42 **so** we can accept that answer as being correct.

**Here is another example:**

$$35.87 \div 2.6 = 1.38$$

rounded up or down the check will be:–

$$36 \div 3 = 12$$

The rough shows there is a mistake – the decimal point being in the wrong position. The answer should be 13.8.

**Try the task on the next page**

TASK SHEET
UPGRADE
CONSTRUCTION

# HOW TO USE A CALCULATOR

Have a go at these. Use rough checks to spot any answers which are incorrect. **Don't use your calculator.**

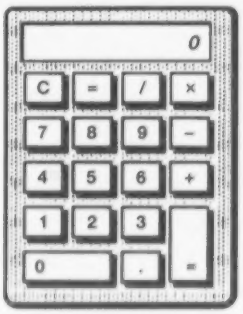
1. 5.6 + 13.3 = 18.9
2. 203.4 + 56.12 = 2595.2
3. 49.6 - 26.4 = 23.2
4. 246.32 - 65.19 = 18.113
5. 5.2 + 8.8 - 4.6 = 9.4
6. 8.34 x 4.19 = 34.94
7. 2.15 x 0.1 = 21.5
8. 1.65 x 0.05 = 0.0825
9. 378 ÷ 13.3 = 2.84
10. 269 ÷ 81.2 = 0.33

TASK SHEET UPGRADE CONSTRUCTION

# USING YOUR CALCULATOR

- Switch on the calculator
- Remember to press the AC or C key.

  This will make sure that any figures entered before have been wiped out.




**Study this example:**

1. Evaluate 13.36 + 2.89 - 6.53

   Rough check 13 + 3 - 7 = 9

   We would use this sequence on the calculator:

   AC 1 3 . 3 6 + 2 . 8 9 - 6 . 5 3 =

   The display gives the answer 9.72 (correct to 2 decimal places)

2. Evaluate $\frac{13.6 \times 26.83}{2.659}$

   A roughcheck gives $\frac{14 \times 27}{3} = 126$

   The sequence of operations is:

   AC 1 3 . 6 x 2 6 . 8 3 ÷ 2 . 6 5 9

   **Answer = 137.23**

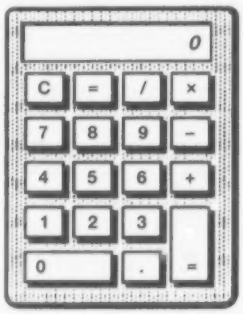
   This answer confirms that the answer is of the correct order **137.23** not 13.723

TASK SHEET UPGRADE CONSTRUCTION

# USING YOUR CALCULATOR

**Use your calculator to solve the following problems:**

Show your rough checks for each one.
working out for each one.




1. 23.5 x 6.421 - 15.32 - 4.69

2. 41.83 - 12.29 + 19.68

3. $\frac{4.7 \times 0.05}{3.4}$ to 3 significant figures

4. Find the value of $\frac{4.7 \times 6.6}{5.2 \times 2.4}$ to 4 significant figures

5. Multiply 16.92 by 0.582 and give your answer correct to 3 significant figures

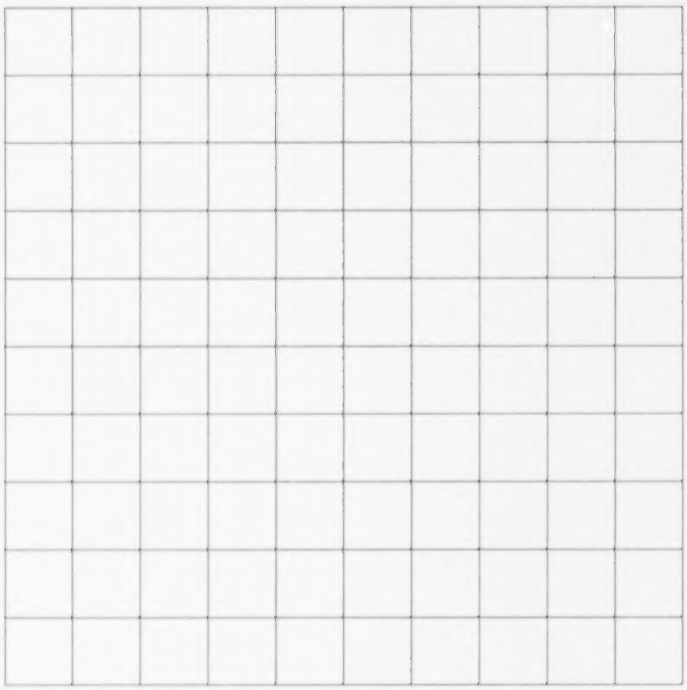
6. $\frac{34.2 + 59.31 + 6.09}{51.2}$ to 4 significant figures

7. $\frac{3.95 \times 0.00612 \times 0.58}{0.52 \times 0.716 \times 18.6}$ to 4 significant figures

FACT SHEET UPGRADE CONSTRUCTION

# PERCENTAGES

The term 'per cent' is the same as saying 'per hundred' and is given the symbol %.



There are 100 squares in this diagram. 1 square = 1% or $\frac{1}{100}$

Therefore, 10 per cent means $\frac{10}{100}$ and is written as 10%

8 per cent means $\frac{8}{100}$ or 8%

In the construction industry allowances are often calculated as percentages, i.e. VAT, trade discounts, bonus payments, etc.
To calculate a percentage on a particular amount is a fairly easy problem.
The procedure to calculate percentages is as follows:

**Example: Calculate 15% of £36.60**

1) 15% of £36.60 (Change the 'of' into 'x')
= 15% x 36.60

2) 15% x 36.60 (Change '15%' into $\frac{15}{100}$)

$= \frac{15}{100} \times 36.60$

3) This statement means 15 x 36.60 divided by 100

4) 15 x 36.60 = 549

5) 549 ÷ 100 = 5.49

6) Therefore, 15% of £36.60 is £5.49

Core Skills
N:2·2

Basic Skills Standards
N:8·1

TASK SHEET UPGRADE CONSTRUCTION

# PERCENTAGES

You may be required to calculate the total cost of materials which includes, for example, V.A.T.

In this case remember to add the V.A.T. to the original cost.

**Example:**

You are working on a housing extension with a bricklayer.

If the price of bricks were £75.00 per 1000 plus 17½% V.A.T., what would be the total cost of 12,000?

**Answer:**

£75.50 per 1000

Therefore, 12,000 cost 12 x £75.50 = £906.00

17.5% of £906.00 = $\frac{17.5}{100}$ x 906 = £158.55

Total cost = cost of bricks (£906.00) plus V.A.T. (£158.55)
= £1064.55

**Calculate:**

a) 12% of £284.60

b) 15% of £189.80

c) 8% of £18.50

d) 26% of £139.80

e) 42% of £334.70

Core Skills
N:2·2

Basic Skills Standards
N:14·1

TASK SHEET UPGRADE CONSTRUCTION

# PERCENTAGES

1) If an apprentice joiner's wage is £85.60 per week and he receives a bonus of 6%, what would his new total wage be?

2) If you calculated that the minimum amount of timber required for a specific job would be 284 linear metres and you then added 6% for a wastage, how much extra timber would you require?

3) If, by paying your bill in cash before delivery you were given a 5% trade discount, how much would a bill of £986.00 be reduced by?

4) If the price of labour and materials for a job was £4284.00, what would be the total cost if you added 18% for profit and overheads?

Core Skills
N:2·2

Basic Skills Standards
N:14·1

TASK SHEET UPGRADE CONSTRUCTION

# PRACTISE YOUR SKILLS

Study this pay slip and complete it by filling in the squares marked with a question mark.

| Rate per hour | No hours worked | Total pay | Deductions | Net pay |
|---|---|---|---|---|
| £5.60 | 40 | ? | 20% | ? |
| ? | 30 | £183 | 15% | ? |
| £5.60 | ? | £156.80 | 13% | ? |
| ? | 28 | £140 | 12.5% | ? |

**Remember** to check your answers

Core Skills
N:2·2

Basic Skills Standards
N:14·1

FACT SHEET UPGRADE CONSTRUCTION

# MEASUREMENT

Very few industries would exist without the use of 'measurement'. This is particularly true of the 'Construction Industry'.

It is difficult to visualise how buildings could be erected, components manufactured or skills performed without the use of measurement.

Skill in the use of measurement is vital to the industry and takes many forms. For example:

a) **Linear** –this is the measurement of length and would be used when we need to determine:

   i) perimeters of buildings, both lengths and heights

   ii) lengths of components, ie. skirting boards, architraves, joists, pipes, cables, etc.

   iii) dimensions of components, ie. heights and widths of doors, windows, etc.

b) **Areas** – this is the two dimensional measuring of spaces and will involve the calculation of areas of:

   i) floors

   ii) walls

   iii) ceilings

   iv) land

   v) roofs.

c) **Volumes** – this involves the measurement of three dimensional objects and the space they occupy and would be used to calculate volumes of:

   i) timber

   ii) concrete

   iii) bricks

   and many more.

Core Skills
N:1·2

Basic Skills Standards
N:3

FACT SHEET UPGRADE CONSTRUCTION

# AREAS OF RECTANGLES

To calculate the areas of rectangles we need to use the formula:

AREA = LENGTH (L) x BREADTH (B)

*(breadth being the term used for width)*

If we look at Fig. 1 we see that a rectangle measuring 6 metres x 3 metres will contain 18 square metres.

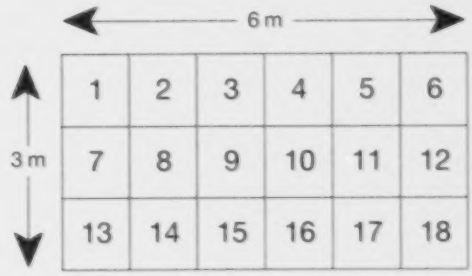



Fig. 1

This applies equally to parts of units as well as whole units.

An example of this is shown in Fig. 2 for an area measuring 4½ metres x 2½ metres.

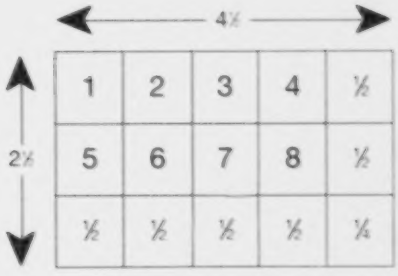



Fig. 2

AREA = L x B

= 4½ x 2½

= 11¼ square metres

**Study the worksheet on Calculations of covering materials and do the task**

Core Skills
N:1·2

Basic Skills Standards
N:3·3
N:17·1

FACT SHEET UPGRADE CONSTRUCTION

# CALCULATIONS OF COVERING MATERIALS

There will be many times where the joiner will be required to calculate the amount of covering materials for various jobs ie. floor coverings, wall coverings, etc.

To do this we need to be able to calculate areas and to perform division of numbers.

## Example:

To calculate the number of floor tiles required to cover the floor area shown at Fig. 3 we must carry out the following operations:

1. Calculate the area of the floor
2. Calculate the area of one tile
3. Divide the area of the floor by the area of the tile.

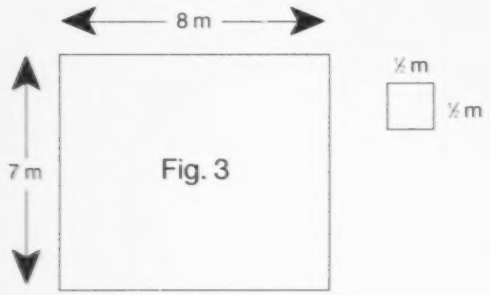


Fig. 3

| | | | | | |
|---|---|---|---|---|---|
| ∴ | AREA OF THE FLOOR | = | 8 x 7 | = | 56 sq metres |
| | AREA OF TILE | = | ½ x ½ | = | ¼ sq metres |
| | No. of TILES | = | 56 ÷ ¼ | = | 224 tiles |

This is a mathematical solution and assumes that the coverings will fit exactly into the area shown. This does not always work in a practical situation.

TASK SHEET UPGRADE CONSTRUCTION

# CALCULATIONS OF COVERING MATERIALS

A dining room measures 6 m x 9 m and is to be covered with carpet tiles which measure 0.50 m x 0.50 m.

How many tiles would you need?

Show all calculations.

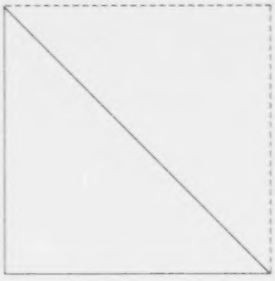
**Answer:**

TASK SHEET UPGRADE CONSTRUCTION

# AREAS OF TRIANGLES

Unlike squares and rectangles, not all the angles of a triangle are at 90°, therefore, a different formula has to be used.

If we appreciate that a triangle can be considered to be half of a rectangle then the formula is quite simple.



Formula = (Base x Height) ÷ 2

or $\frac{\textbf{Base x Height}}{\textbf{2}}$

## Example:

Find the area of a triangle with a height of 2.5m and a base of 2m.

$$\text{Formula} = \frac{\textbf{Base x Height}}{\textbf{2}}$$

$$= \frac{2 \times 2.5}{2} = \frac{5}{2} = 2.5\text{m}^2$$

Find the areas of the following triangles:

1. Height – 6m Base – 3m
2. Height – 9.8m Base – 2.4m
3. Height – 3.6m Base – 1.4m
4. Height – 12.4m Base – 6.6m
5. Height – 4.8m Base – 600mm

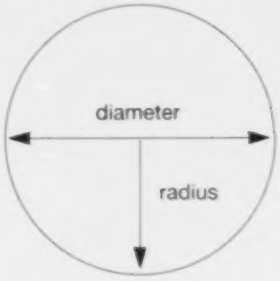
**100mm is the same as 0·1m**
**1000mm is the same as 1m**

Core Skills
N:1·2

Basic Skills Standards
N:11·3

# AREAS OF CIRCLES

To determine the area of a circle we need to use the formula which has been devised using the symbol π (pi) which refers to the relationship between the areas and the circumference of a circle. Its value is:




$3\frac{1}{7}$ or $\frac{22}{7}$ or 3.142

The formula for the area of a circle is:
**Area = $\pi r^2$ = p x r x r**
(r = radius of circle)

## Example:

Find the area of a circle with a radius of 5m.

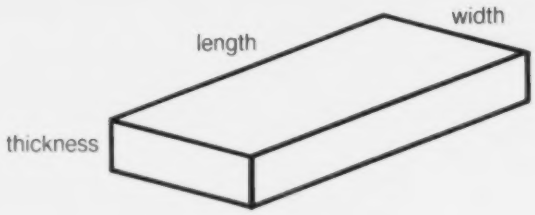
Area = $\pi r^2$
= 3.142 x 5 x 5 = 78.55$m^2$

Find the areas of the following circles:

1. 8m radius
2. 12m radius
3. 6.2m radius
4. 9.6m radius
5. 28.4m radius
6. A large semi-circular bay window is built as an addition to a room. The diameter of the bay is 6.4m. Calculate the area.

A semi-circle is half a full circle.

# VOLUMES




The object above has a **length**, **width** and **thickness** (depth). The amount of space it occupies is known as its 'volume'.

The volume of an object is found by multiplying its three linear measurements together and expressing the result in 'cubic' measure. If the unit of measure is metres, then the answer will be in cubic metres usually expressed as '$m^3$'.

## Example:

If the dimensions of the above figure were:

**length 6 metres; width 2 metres; thickness 1 metre**

then its volume would be: 6m x 2m x 1m = 12 cubic metres = $12m^3$

It is always advisable to work out the volume using the same units. You cannot mix metres and millimetres together when multiplying, therefore, always convert to the units required before multiplying.

## Example:

Find the volume of a piece of timber measuring 2.6m x 200mm x 60mm

| | | |
|---|---|---|
| Volume | = | **L x W x Th** |
| | = | 2.6m x 200mm x 60mm |
| | = | 2.6m x 0.2m x 0.06m |

- Find the volumes of the following:

1. 6m long x 3m wide x 2m thick
2. 8.2m long x 2.9m wide x 1.6m thick
3. 3.4m long x 150mm wide x 100m thick
4. 6.6m long x 200mm wide x 50mm thick

TASK SHEET
UPGRADE
CONSTRUCTION

# MAKING PAYMENTS IN CASH

**You need to buy these goods.**

**Look at the prices and add them up.**

**How much does it all cost?** _____

_____

\+ _____

=

**How much change would you get from £25.00**

Change _____

**Remember** → **To check the bill and make sure you've got the right change**

Core Skills
N:1·2

Basic Skills Standards
N:1·1

TASK SHEET UPGRADE CONSTRUCTION

# RECEIVING PAYMENTS IN CASH

## Situation

You have just finished fitting a new lock for a client. Work out the bill.

| | | |
|---|---|---|
| Labour | £7.50 per hour x 2 hours | = |
| Materials | £19.39 (mortice lock) | = |
| | £1.89 (security chain) | = |
| | Total | = |

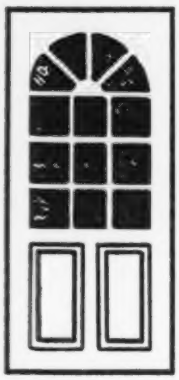
- Write a receipt:

**Jones Joiners, Croft Street, Walsall**

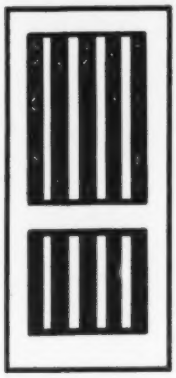
| | |
|---|---|
| Labour | _____ |
| Materials | _____ |
| **Total** | _____ |

TASK SHEET
UPGRADE
CONSTRUCTION

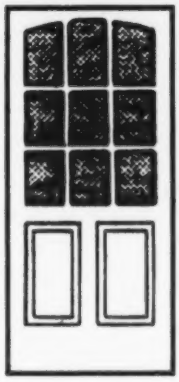
# MAKING NON-CASH PAYMENTS



Kentucky
**£159.99**



Windsor
**£159.99**



Georgia
**£165.95**

You are buying these 3 doors for a client.

- Work out the total and write a cheque made payable to Anderson & Hill, Trade Suppliers Ltd.

Date 19

Pay _____ or order

£

JONES JOINERY

- Now check the receipt.

Receipt

| | |
|---|---|
| Kentucky door | 159.99 |
| Windsor door | 159.99 |
| Georgia door | 165.95 |
| Balance | 485.93 |
| Cheque | 485.93 |
| Change | 0.00 |

Core Skills
N:1·2

Basic Skills Standards
N:1·3

TASK SHEET UPGRADE CONSTRUCTION

# RECEIVING NON-CASH PAYMENTS

**Work out the bill for the following:**

6m 46 x 19 P&E at £1.00 per metre = _____

6 boxes 1½" No. 10 screws at £1.80 per box = _____

3 mortice locks at £9.50 each = _____

Total = _____

- Now check the cheque

Date 26 March 19 92

Pay Anderson & Hill, or order

Forty five pounds thirty pence only £ 45.30

JONES JOINERY

Mick Jones

- Now write a receipt

Anderson & Hill

No 123 _____ 19

Received from _____

the sum of _____

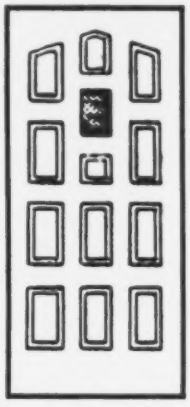
_____

Signed _____

TASK SHEET UPGRADE CONSTRUCTION

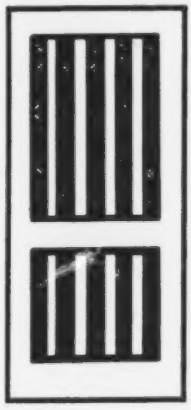
# SELECTING GOODS BY PRICE

You want to buy a door size 78" x 33" x 1¾".



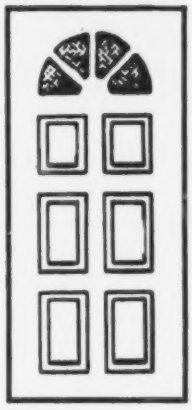
**Elizabethan (Stained)**

| | |
|---|---|
| 78" x 30" x 1¾" | **£69.95** |
| 78" x 33" x 1¾" | **£74.95** |
| 80" x 32" x 1¾" | **£79.95** |



**Windsor (Stained)**

| | |
|---|---|
| 78" x 30" x 1¾" | **£60.95** |
| 78" x 33" x 1¾" | **£65.95** |
| 80" x 32" x 1¾" | **£71.95** |



**Carolina (Stained)**

| | |
|---|---|
| 78" x 30" x 1¾" | **£68.95** |
| 78" x 33" x 1¾" | **£73.95** |
| 80" x 32" x 1¾" | **£78.95** |

Look at the above items and work out which is the cheapest.

**Answer:**

**Check**

Did you –

- Read the prices?
- Check the items were the same size?
- Choose the cheapest item?

TASK SHEET
UPGRADE
CONSTRUCTION

# PLANNING THE USE OF AVAILABLE MONEY

**Situation:** You've got **£25.00** to spend on improvements to your front door. You need a new Lever latch set, door knob and letter plate in **brass** or **brass effect**.

- Look at this price list of door accessories and decide how to spend the money.

**GEORGIAN STYLE BRASSWARE**

| | |
|---|---|
| 8 x 1⅝ in (203 x 48mm) oblong lever latch set | 10.99 |
| 2¼in (57mm) round lever latch set | 8.99 |
| 4½in (114mm) square lever latch set | 8.49 |
| 4½in (114mm) lever latch set | 3 pack 21.49 |
| 6in (152mm) oblong lever lock set | 8.99 |
| 8 x 1⅝in (203 x 48mm) lever lock set | 10.99 |
| 2in (51mm) mortice knob set | 8.49 |
| 2in (51mm) mortice knob set | 3 pack 19.99 |
| 3½in (89mm) door knob | 6.99 |
| 6¼in x 3⅛in (159 x 79mm) door knocker | 4.49 |
| 8 x 3⅛in (203 x 203mm) door knocker | 5.89 |
| 10 x 3in (254 x 76mm) letter plate | 7.49 |
| with knocker | 9.99 |
| 1in (25mm) keyhole with cover | 0.99 |
| Cylinder rim pull | 1.99 |
| Oblong door bell button | 3.99 |
| 11¾in x 2⅝in (299 x 70mm) finger plate | 6.89 |

**ALUMINIUM RANGE FOR DOORS**

| | |
|---|---|
| 3 x ½in (76 x 13mm) lever latch set white | 4.99 |
| 3 x 1½in (76 x 38mm) satin chrome | 4.39 |
| 3 pack | 9.99 |
| 5¾ x 1½in (133 x 38mm) lever lock set white | 5.59 |
| 5¾ x 1½in (133 x 38mm) satin chrome | 4.79 |
| 2½in (64mm) mortice latch | 1.99 |
| 2½in (64mm) mortice lock | 4.49 |
| 10 x 3in (254 x 76mm) letter plate white | 5.69 |
| satin chrome | 4.99 |
| 10 x 3in (254 x 76mm) letter plate back flap white plastic | 1.89 |
| Cylinder pull white | 1.29 |
| Barrel bolt 2in (51mm) | 0.99 |
| 3in (76mm) | 1.39 |
| 4in (102mm) | 1.89 |
| Hat & coat hook | 0.99 |
| Wardrobe hook | 0.99 |

**VICTORIAN STYLE BRASSWARE**

| | |
|---|---|
| 4½in (114mm) oblong lever latch set | 7.99 |
| 4½in (114mm) lever latch set | 3 pack 18.99 |
| 2½in (64mm) round lever latch set | 7.99 |
| 5¾in x 1½in (146 x 38mm) oblong lever lock set | 9.49 |
| 2in (51mm) mortice knob set | 7.59 |
| 2in (51mm) mortice knob set | 3 pack 17.99 |
| Door knob 1in (25mm) | 2 pack 1.89 |
| 1¼in (32mm) | 2 pack 1.99 |
| 1in (25mm) | 10 pack 5.99 |
| 1½in (38mm) | 6 pack 5.69 |
| 1½in (38mm) | 4 pack 4.69 |
| 1½in (38mm) | 2 pack 2.79 |
| 2½in (64mm) | 5.99 |
| Door knocker 6in x 32in (152 x 76mm) | 3.99 |
| 7¾in x 4in (197 x 102mm) letter plate | 6.99 |
| 10in x 4in (254 x 102mm) with knocker | 9.99 |
| 11in x 3¼in (279 x 83mm) horizontal | 5.99 |
| Key hole | 0.99 |
| Cylinder rim pull | 1.99 |
| Door bell button | 3.29 |
| 11¾in x 3in (299 x 76mm) finger plate | 3.79 |
| Hat & coat hook | 1.89 |
| Wardrobe handle – 7in (179mm) | 2.79 |
| Wardrobe handle – 5in (127mm) | 1.89 |

**REGENCY BRASSWARE**

| | |
|---|---|
| Regency Escutcheon | 4.99 |
| Regency latch set | 13.99 |
| Regency letter plate | 17.49 |
| Regency door knocker | 10.99 |
| Regency mortice knob | 11.99 |
| Regency lock set | 14.99 |
| Regency round latch set | 13.99 |
| Regency centre knob | 8.99 |
| Regency cylinder pull | 3.59 |
| Regency bell push | 6.99 |
| Regency finger plate | 12.99 |

- Work out the total for the changes you decide upon



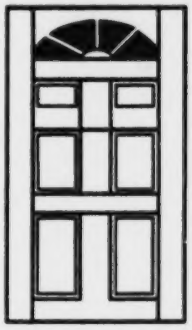
Core Skills
N:1·2

Basic Skills Standards
N:10·1

TASK SHEET UPGRADE CONSTRUCTION

# RECORDING THE SPENDING OF AVAILABLE MONEY

- Use this sheet to keep a record of the money you spent on improvements to your front door.



- Fill in the details on this form.

| Date | Item | | Money £ p |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | Total | |

Core Skills

N:1·1

Basic Skills Standards

N:10·2

# PLANNING AND SCHEDULING EVENTS

## Renovation of House

| JULY 1992 | | |
|---|---|---|
| Wed | 14 | |
| Thurs | 15 | |
| Fri | 16 | |
| Sat | 17 | |
| Sun | 18 | |
| Mon | 19 | |
| Tues | 20 | |
| Wed | 21 | |
| Thurs | 22 | |
| Fri | 23 | |
| Sat | 24 | *House finished* |
| Sun | 25 | |

## Situation:

Your client requires the house renovations to be finished by **Saturday 24 July** as he is having his 40th birthday party on that day.

Your job is to fit windows and doors.

The windows will take **2 days and 4 hours**
The doors (1 exterior and 4 interior) will take **1 day and 3 hours**
**(A working day is 7 hours)**

- Work out your best **starting date** in order to complete the job in good time.
- **Mark the starting date on the calendar.**

TASK SHEET
UPGRADE
CONSTRUCTION

# MEASURING IN LENGTHS

## Situation:

The room you are in at present requires to be fitted with new skirting boards.

- **Measure** the existing skirting boards as **one complete length**.
- Make a note of **individual lengths** and arrive at a total.

## Answer:

Core Skills
N:1·1

Basic Skills Standards
N:3·1

TASK SHEET UPGRADE CONSTRUCTION

# MARKING UP LENGTHS TO REQUIRED DIMENSIONS

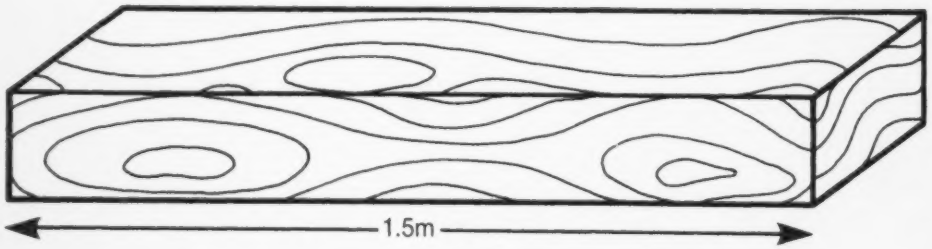
**Situation:**

Go to the workshop – select a piece of **timber 1.5m in length**.

On this piece **mark** out the following lengths –

**300 mm**

**1.005 m**




**Make sure your measurements are accurate**

Core Skills

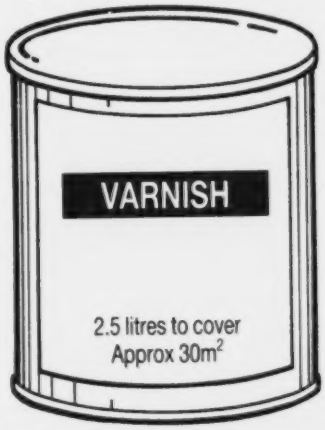
N:1·2

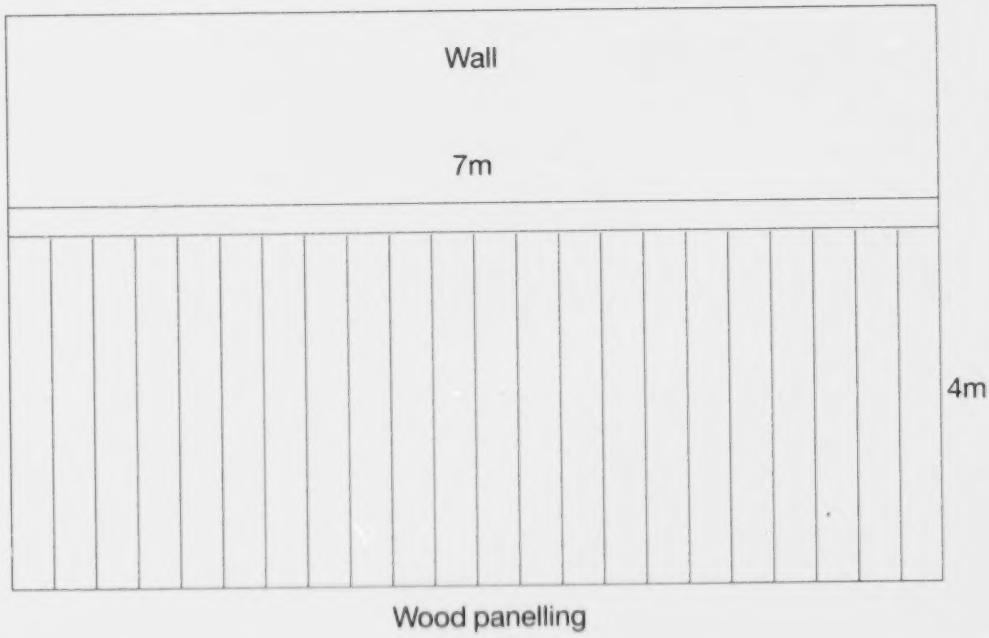
Basic Skills Standards

N:3·2

TASK SHEET
UPGRADE
CONSTRUCTION

# CALCULATING AREAS OF RECTANGULAR SHAPES




- **Have you got enough varnish to cover the wood panelling?**

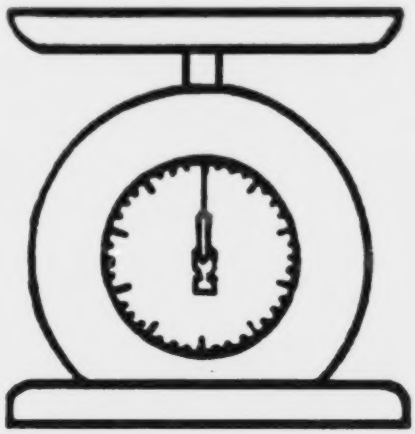
**Answer:**

Core Skills
N:1·2

Basic Skills Standards
N:3·3

TASK SHEET
UPGRADE
CONSTRUCTION

# MEASURING WEIGHTS

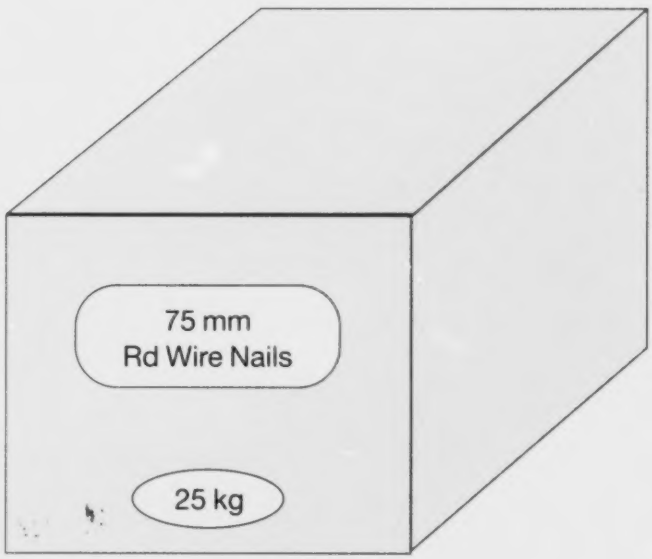


## Situation:

A specified amount of nails is required for a job.

You are given a bag of nails taken from a 25 kilogram box of nails.

Weigh them and check that you have been given the required amount which is **3½ kilograms**.




Core Skills
N:1·2

Basic Skills Standards
N:4·1

TASK SHEET UPGRADE CONSTRUCTION

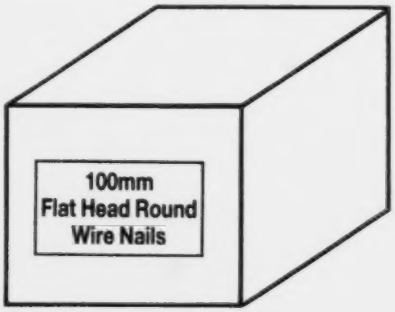
# WEIGHING OUT REQUIRED QUANTITIES

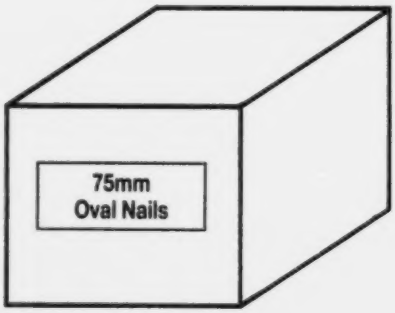
You are erecting a study partition which requires a selection of nails.

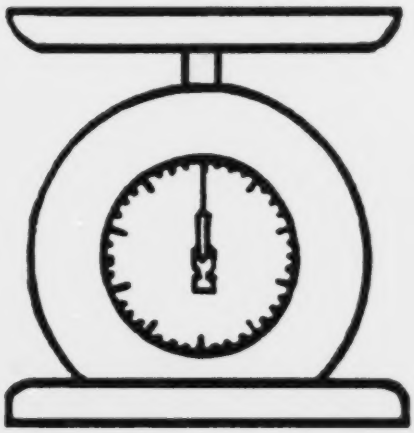
- Weigh out 1 kilogram of 100mm flat head round wire nails

  and

- 1½ kilograms of 75 mm oval nails.



Core Skills

N:1·2

Basic Skills Standards

N:4·2

TASK SHEET UPGRADE CONSTRUCTION

# MEASURING OUT REQUIRED QUANTITIES

**Situation:**

You are assembling framework.

You require a small quantity of powdered resin glue.

- Measure out 250 grams of powdered resin glue.

The instructions tell you to measure out 500g of powdered resin glue. Add 120 ml of cold water. Mix to a thick paste without any lumps.

- How much water would you need for the quantity (250 grams) you have already measured out for assembling framework.

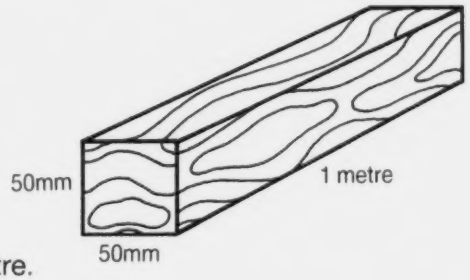
Core Skills
N:1·2

Basic Skills Standards
N:4·2

TASK SHEET UPGRADE CONSTRUCTION

# TIMING AND RECORDING ACTIVITIES AND SETTING TIME DEVICES

- Work in pairs, 1 working, 1 recording time.




**Situation:**

Go to the workshop

Select a piece of timber

**50 x 50mm** – minimum length 1 metre.

You will also require a **stop watch** to record the time.

Mark off **4 pieces 50mm** in length.

Set the stop watch to zero.

Select a sharp tenon saw and cut each of the 4 pieces in turn.

During each performance time how long it takes to saw each piece.

Fill in the **information** on the following chart.

| Timber | Time |
|---|---|
| Piece 1 | |
| Piece 2 | |
| Piece 3 | |
| Piece 4 | |
| Total | |

Core Skills
N:1·2

Basic Skills Standards
N:5·1
N:5·2

TASK SHEET
UPGRADE
CONSTRUCTION

# GIVING DIRECTIONS

**Situation:**

You and a friend are going to the

**Building Exhibition at the National Centre, Birmingham.**

Your friend is going to drive you both there.

Give him/her directions on how to get there.

Use any up-to-date map.

**BIRMINGHAM NATIONAL EXHIBITION CENTRE**

½ mile

**Answer:**

- Try to work out the distance from your home town.

Basic Skills Standards
N:6·1

TASK SHEET UPGRADE CONSTRUCTION

# FOLLOWING DIRECTIONS

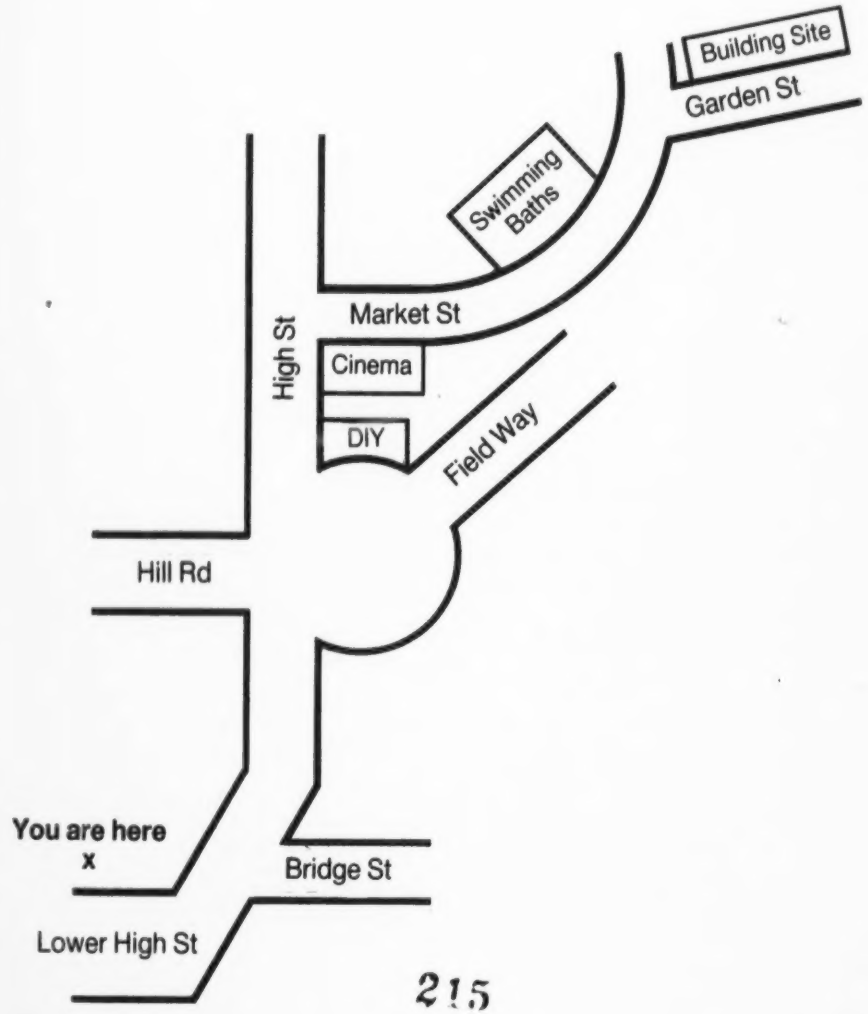
## Situation:

You need to get to your work on a **building site** in **Garden Street**, off **Market Street.**

This map and these directions are given to you by your boss:

**"Go up Lower High Street, pass Bridge Street on your right. Go up the High Street, across the roundabout, Hill Road's on your left. You'll see a big DIY shop on your right. Pass that and watch out for the cinema. Turn right there. Go up Market Street, pass the swimming baths and take the first right into Garden Street. You'll see the site on your left".**

- Indicate the route you took on the map.






Basic Skills Standards
N:6·2

TASK SHEET UPGRADE CONSTRUCTION

# REPORTING A SINGLE ITEM OF INFORMATION FROM TABLES AND CHARTS

## Situation:

You've decided to decorate a room.

The distance round your room is 26m and your room height is 2.80m.

Use the table to work out **how much paint** you would need.

| | MEASUREMENTS AROUND ROOM – METRES | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 26 | 24 | 23 | 22 | 21 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 10 | 9 |
| **ROOM HEIGHT Metres** | **HOW MANY LITRES YOU NEED** | | | | | | | | | | | | | | |
| **2.15 – 2.30m** | 5½ | 5 | 5 | 4½ | 4½ | 4 | 4 | 3½ | 3½ | 3 | 3 | 2½ | 2½ | 2 | 2 |
| **2.30 – 2.45m** | 5½ | 5½ | 5 | 5 | 4½ | 4½ | 4 | 4 | 3½ | 3½ | 3 | 3 | 2½ | 2½ | 2 |
| **2.45 – 2.60m** | 6 | 5½ | 5½ | 5 | 5 | 4½ | 4½ | 4 | 4 | 3½ | 3½ | 3 | 2½ | 2½ | 2 |
| **2.60 – 2.75m** | 6½ | 6 | 5½ | 5½ | 5 | 5 | 4½ | 4½ | 4 | 3½ | 3½ | 3 | 3 | 2½ | 2½ |
| **2.75 – 2.90** | 6½ | 6½ | 6 | 6 | 5½ | 5 | 5 | 4½ | 4 | 4 | 3½ | 3½ | 3 | 2½ | 2½ |
| **2.90 – 3.05** | 7 | 6½ | 6½ | 6 | 5½ | 5½ | 5 | 5 | 4½ | 4 | 4 | 3½ | 3 | 3 | 2½ |
| **3.05 – 3.20m** | 7½ | 7 | 6½ | 6½ | 6 | 5½ | 5½ | 5 | 4½ | 4½ | 4 | 3½ | 3½ | 3 | 2½ |
| **CEILINGS** | 4 | 3½ | 3 | 3 | 2½ | 2½ | 2 | 2 | 1½ | 1½ | 1 | 1 | 1 | ½ | ½ |

## Find the information you need and write your answer here:

**Answer:**

TASK SHEET UPGRADE CONSTRUCTION

# REPORTING INFORMATION PRESENTED IN NUMBER

| | | | |
|---|---|---|---|
| **SUPERLUX/MASTERBOARD** | | | |
| 2440 x 1220 | 6mm | Masterboard | £19.40 |
| | 9mm | Superlux | £30.40 |
| | 12mm | Superlux | £40.08 |
| **HARDBOARD 3.2mm Std.** | | | |
| 2440 x 1220 | | | £3.60 |
| 2135 x 915 | | | £2.69 |
| 2032 x 812 | | | £2.82 |
| 1982 x 762 | | | £2.72 |
| 1830 x 1220 | | | £3.20 |
| 1830 x 610 | | | £1.60 |
| 2440 x 1220 | 3.2mm | White Faced | £6.13 |
| 2440 x 1220 | 3.2mm | Peg Board | £5.66 |
| **DECORATIVE WALLBOARDS** | | | |
| 2440 x 1220 | **Hardboard backed** | | £4.30 |
| 2440 x 1220 | **Plywood backed** | | |
| | Rosewood | | £6.88 |
| | Olive Ash | | £6.88 |
| | Shan Teak | | £6.88 |
| | Redwood Cedar | | £6.88 |
| | Italian Pine | | £6.88 |
| | Cherry Olive | | £6.88 |
| | Figured Oak | | £6.88 |
| | Kitayama Cedar | | £6.88 |
| | Royal Oak | | £6.88 |
| | London Cherry | | £6.88 |
| | Montego Walnut | | £6.88 |
| 2440 x 1220 | **Canfor Barge – 6mm** | | |
| | Manor House Red Brick | | £22.80 |
| | Manor House Gold Brick | | £22.80 |
| | Rustic Stone Sudbury Gold | | £22.80 |
| **VENEERED PLYWOOD** | | | |
| 2440 x 1220 x | 4mm Oak/Balancer | | £21.04 |
| | 6mm Oak/Balancer | | £26.42 |
| | 4mm Teak/Balancer | | £20.52 |
| | 6mm Teak/Balancer | | £23.97 |
| | 4mm Sapele/Balancer | | £16.76 |
| | 6mm Sapele/Balancer | | £23.04 |
| **MEDIUM DENSITY FIBREBOARD** | | | |
| 2440 x 1220 x | 6mm | | £11.32 |
| | 8mm | | £12.66 |
| | 12mm | | £16.80 |
| | 15mm | | £19.20 |
| | 18mm | | £22.22 |
| | 25mm | | £28.00 |

- Using the list of materials tell someone the price of the following:

  12mm Superlux _____

  1830 x 610 hardboard _____

  Cherry Olive decorated wallboard _____

  12mm medium density fibreboard _____

TASK SHEET
UPGRADE
CONSTRUCTION

# REPORTING QUANTITIES

**Situation:**

Go to the **stock room** in your College/Workshop.

**Check on the number of full boxes** (each box contains 10 packs) **of different sizes** of **countersunk** steel screws.

**Record** them on the check card below:

| Equipment Check Card | | | |
|---|---|---|---|
| **Countersunk** | **Screw Size** | **No. of Boxes** | **No. of packs** |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | **Total** | |

Core Skills
N:1·1

Basic Skills Standards
C:3
N:7·3

TASK SHEET UPGRADE CONSTRUCTION

# MAKING PAYMENTS

## TIMBERCO LTD

### DOORS

| | | |
|---|---|---|
| 78 x 15 Louvre Door | | |
| ~~£17.82~~ | | **£1.00 off** |
| 6 Panel Internal Colonist | | |
| ~~£25.95~~ | | **£3.00 off** |
| 6 Panel Internal Pine | | |
| ~~£36.95~~ | | **£3.70 off** |
| 6 Panel Internal Hardwood | | |
| ~~£59.95~~ | | **£6.00 off** |
| Sapele Flush | **~~£18.99~~** | **£1.00 off** |
| 15 Light Ready Glazed with Bevel Glass | **~~£80.95~~** | **£9.00 off** |
| Brass Latch Packs for above doors (handles/hinges/ latches) ~~£7.99~~ | | **£0.80 off** |

**Situation:**

You need 1 x 6 panel Internal Colonist door and 1 brass latch pack.

Find the total price after reduction.

**Answer:**

**Fill in the cheque:**

Date _____ 19 _____

Pay _____ or order

£

JONES JOINERY

Core Skills
N:1·2

Basic Skills Standards
N:8·1

# RECEIVING PAYMENTS

TASK SHEET UPGRADE CONSTRUCTION

Check the cheque from a client for materials you have bought.

Write him a receipt.

| | |
|---|---|
| 10 sq ft Mahogany conti board at 60p per sq ft | 9 sq ft Oak conti board at 81p per sq ft |

8 sq ft White conti melamine chipboard at 43p per sq ft

Date *June 26* 1992

Pay *Jones Joinery Ltd* or order

*Sixteen pounds 73p*

£ *16.73*

M C Donald

*M C Donald*

**Receipt**

| Goods & description | Quantity | Price |
|---|---|---|
| | | |

Total amount due £ _____

Core Skills
N:1·2

Basic Skills Standards
N:14·1

TASK SHEET UPGRADE CONSTRUCTION

# SHARING PAYMENT FOR GOODS AND SERVICES

It's break time – you're sent to the shop for drinks and buns for 9 of you.

| | |
|---|---|
| 3 Fanta Oranges | £1.80 |
| 2 Cokes | £1.30 |
| 4 Teas | £2.00 |
| 2 Iced buns | £0.70 |
| 2 Chocolate buns | £0.80 |
| 4 Eccles cakes | £1.40 |
| 1 Jam donut | £0.40 |
| Total | £8.40 |

Your workmates are happy for the bill to be divided up equally.

- Work out to the nearest penny what everyone owes you
- If each one gives you a £1.00 what change would you have for each person?

**Answer:**

**Change** _____

**Remember**

- Check the bill is correct.
- Check you've given each one the correct change.

Core Skills
N:1·2

Basic Skills Standards
N:8·3

TASK SHEET UPGRADE CONSTRUCTION

# SELECTING GOODS AND SERVICES FOR PRICE AND QUALITY

- Look at the above tins of varnish – which is the best buy?
- Check sizes of items.
- Compare prices by changing items into the same unit where necessary.
- Choose the cheapest.

**Answer:**

Core Skills
N:1·2

Basic Skills Standards
N:9·1

TASK SHEET UPGRADE CONSTRUCTION

# SELECTING INVESTMENT AND CREDIT ARRANGEMENTS

| ACCOUNTS FOR SCHOOL LEAVERS | | | | | |
|---|---|---|---|---|---|
| **Bank** | **Account** | **Special offers** | **Gross interest rate per annum** | **Cheque book** | **Overdraft** |
| Abbey National | Current | Free driving lesson and further discounted lessons, or £15 petrol vouchers | 2.55 | Yes | Yes |
| Barclays | Plus | £20 worth of music vouchers | 3 | No | No |
| Lloyds | Headway | Camera | 5.5 | Yes | No |
| Midland | Livecash | Cheap CDs and tapes | 5 | No | No |
| NatWest | Card Plus | £30 worth of music vouchers | 4.6 | Yes | No |
| TSB | Interest Cheque | £15 worth of Olympus sports vouchers & discount vouchers, plus one free driving lesson | 2.5 | Yes | Yes |

- Select the account with the best interest
- Considering the special offers and other facilities – would you still make the same choice?

**Answer:**



Core Skills
N:1·2

Basic Skills Standards
N:9·2

TASK SHEET
UPGRADE
CONSTRUCTION

# PLANNING THE USE OF AVAILABLE MONEY

**Situation:**

You've won first prize at work for being the best apprentice.

You have won £70.00 and you need to buy the following items:

- a claw hammer
- a hacksaw
- a coping saw
- a 22" handsaw
- a 10" tenon saw
- a 21" bow saw.

- **Decide which of the items from this list you can afford to buy.**

Bear in mind you need to buy the best you can afford and need to spend as much of the prize money as possible.

- **Work out the total amount of money you will spend.**

**Total:**

224

**HAMMERS**

**Stanley Steelmaster Professional Claw Hammer** ST1. 20oz ..... **£19.45**

**Stanley Nailmaster Claw Hammer** H1½. 16oz ..... **£12.25**

**B&Q Steel Shaft Claw Hammer** 16oz ..... **£6.12**

**Estwing Hammer** E3-20C ..... **£22.99**

**Stanley Ash Hammer** W1. Forged Evertite head. 10oz ..... **£9.10**

**Draper Magnetic Tack Hammer** TH7 ..... **£8.16**

**B&Q Wooden Carpenters Mallet** HWM45. 4½" ..... **£7.15**

**Thor Rubber Mallet** 953B 400g ..... **£4.09**

**Keen Brick Hammer** KSPB1 ..... **£9.99**

**Sandvik Club Hammer** 496-1250 ..... **£13.25**

**Stanley Handyman Claw Hammer** H201. Forged Evertite head. 20oz ..... **£12.65**

**Black Forge Club Hammer** Steel shaft.. 2½ lbs ..... **£10.49**

**Black Forge Warrington Hammer** Hickory handle. 8oz ..... **£6.15**

**Black Forge Cross Pein Hammer** Hickory handle. 3½ oz ..... **£5.99**

**HACKSAWS**

**Workman Junior Hacksaw** ..... **£1.22**

**Workman Junior Hacksaw Blades** 6"x ¼". For metal. Pack of 10 ..... **£1.28**

**Spear & Jackson Handyman Hacksaw** 70-400R. Blade can be angled at 90° to the frame. Ideal for awkward sawing positions. For cutting metal and plastics ..... **£9.49**

**Spear & Jackson Professional Eclipse Hacksaw** 70-20TR. Blade can be angled at 90° to the frame. Ideal for awkward sawing positions. For cutting metal and plastics ..... **£12.49**

**Spear & Jackson Eclipse Professional Bimetal Hacksaw Blades** 71-424R 300mm/12". Pack of 2 ..... **£3.19**

**Plasplugs Junior Hacksaw** JH807 Quick trigger-action blade change, metal and wood cutting blades ..... **£2.35**

**COPING SAWS**

**Spear & Jackson Eclipse Coping Saw** 70-CP1R. For cutting shapes in wood, plastics and soft metals ..... **£7.79**

**Spear & Jackson Eclipse Coping Saw Blades** 71-CP7R. Pack of 10 ..... **£2.69**

**HAND SAWS**

**Spear & Jackson Work Horse Universal Handsaw** B99. 550mm/22" ..... **£15.32**

**Workman Hard Point Handsaw** 550mm/22" ..... **£2.99**

**Sandvik Hard Point Universal Handsaw** 244.550mm/22" ..... **£11.49**

**TENON SAWS**

**Spear & Jackson Universal Tenon Saw** C41. 250mm/10" ..... **£8.02**

**Spear & Jackson Work Horse Universal Tenon Saw** B22.250mm/10" ..... **£16.60**

**Workman Hard Point Tenon Saw** 250mm/10" ..... **£5.61**

**Sandvik Universal Tenon Saw** 241 250mm/10" ..... **£12.99**

**BOW SAWS**

**Sandvik Hard Point Bow Saw** 331.533mm/21" ..... **£9.65**

**Sandvik Bow Saw Blade** 51. 533mm/21" ..... **£3.99**

Core Skills
N:1·2

Basic Skills Standards
N:10·1

TASK SHEET UPGRADE CONSTRUCTION

# RECORDING THE SPENDING OF AVAILABLE MONEY

Record the details of the items you bought with your prize money and the cost of each one.

| Item | Cost |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |
| Total | |

- Record each item and cost in a suitable way.
- Work out the total spent.

Core Skills
N:1·2

Basic Skills Standards
N:10·2

# PLANNING AND SCHEDULING EVENTS

## House Renovation

Your client requires the house renovations to be finished by **July 24**. Your job is to fit windows and doors. Windows take 2½ days, doors 1½. You must also work out when to order the materials necessary for the job. Work out your best starting date.

| June | July | |
|---|---|---|
| 1 | 1 | |
| 2 | 2 | |
| 3 | 3 | |
| 4 | 4 | |
| 5 | 5 | |
| 6 | 6 | |
| 7 | 7 | |
| 8 | 8 | |
| 9 | 9 | |
| 10 | 10 | |
| 11 | 11 | |
| 12 | 12 | |
| 13 | 13 | |
| 14 | 14 | |
| 15 | 15 | |
| 16 | 16 | |
| 17 | 17 | |
| 18 | 18 | |
| 19 | 19 | |
| 20 | 20 | |
| 21 | 21 | |
| 22 | 22 | |
| 23 | 23 | |
| 24 | 24 | *Finished* |
| 25 | 25 | |
| 26 | 26 | |
| 27 | 27 | |
| 28 | 28 | |
| 29 | 29 | |
| 30 | 30 | |
| | 31 | |

| Order windows (Allow 3 weeks) | Order special front door (Allow 2 weeks) |
|---|---|

- Make notes on the calendar to remind you

Core Skills
N:1·2

Basic Skills Standards
N:10·3

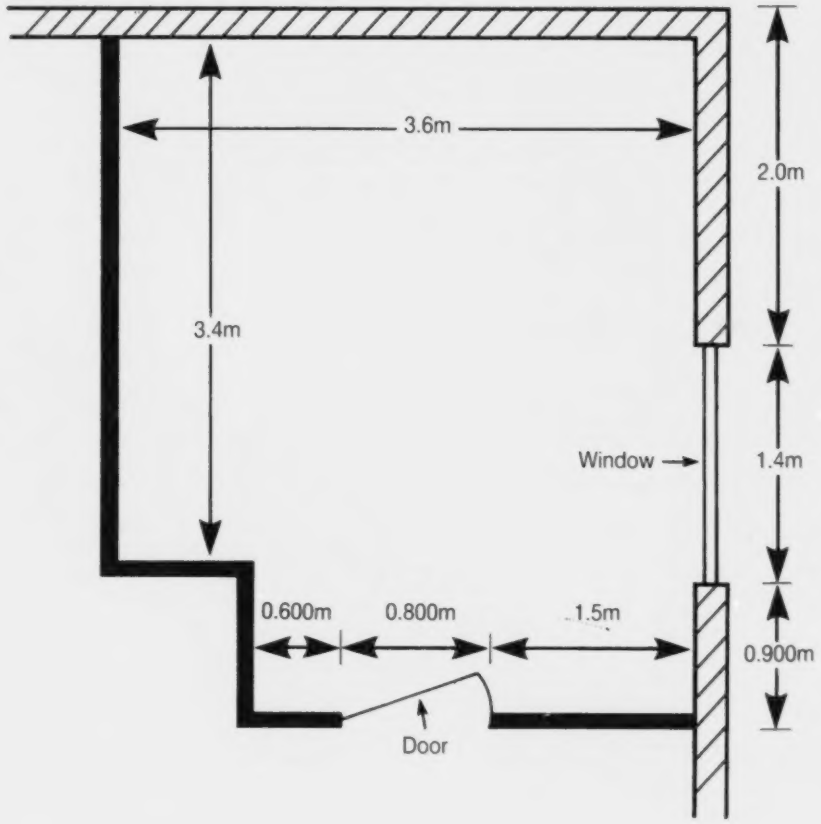
TASK SHEET UPGRADE CONSTRUCTION

# MAKING SCALE DRAWINGS

1. A client required you to design a new kitchen layout. He has provided a sketch of the kitchen showing shape and dimensions. Your first task is to draw a plan view to a suitable scale.

2. On this sheet is shown the drawing of the kitchen.

3. Reproduce a plan of the inside dimensions of the kitchen to a scale 1:20.




**Remember** **To scale measurements down accurately.**

Basic Skills Standards
N:17·2

TASK SHEET UPGRADE CONSTRUCTION

# CALCULATING AND MEASURING OUT REQUIRED VOLUMES

## Crackafilla

**Mixing**

Use about 2 volumes interior Crackafilla to 1 volume of water for small cracks and normal surfaces. Use less water for very absorbent surfaces, for deep cracks and holes. Mix carefully to form a smooth paste.

**Measure out the required volumes of Crackafilla and water to fill several small cracks.**

Work out the quantities you need and use a suitable measure.

Remember → **To measure accurately.**

Core Skills
N:1·2

TASK SHEET UPGRADE CONSTRUCTION

# CALCULATIONS

A rectangular room measuring 3.200m x 4.350m is to be floored with tongued and grooved boarding which costs £9.90 per $m^2$.

**Calculate:**

a) The **amount of flooring** you would order while allowing for 10% wastage.

b) The **total cost** of the flooring.

**Answer:**



Core Skills

N:1·2

TASK SHEET
UPGRADE
CONSTRUCTION

# COSTING OF TIMBER

A quantity of softwood costs **£1.35 per metre run**.

How many metres are contained in a length **costing £10.00?**

**Answer:**



Core Skills
N:1·2

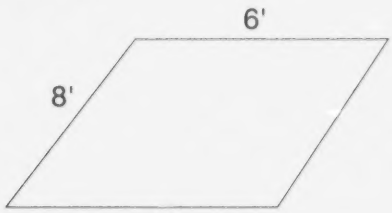
TASK SHEET UPGRADE CONSTRUCTION

# METRIC EQUIVALENTS

| Metric equivalents for length | | Metric equivalents for squares | |
|---|---|---|---|
| 1 centimetre | 0.394 inches | 1 sq centimetre | 0.1550 sq in |
| 1 inch | 2.540 centimetres | 1 sq inch | 6.452 sq centimetres |
| 1 metre | 3.281 feet | 1 sq metre | 10.764 sq feet |
| 1 foot | 0.305 metres | 1 sq foot | 0.09290 sq metres |
| 1 metre | 1.0936 yards | 1 sq metre | 1.196 sq yards |
| 1 yard | 0.9144 metres | 1 sq yard | 0.8361 sq metres |
| 1 kilometre | 0.6214 mile | 1 sq kilometre | 0.386 sq mile |
| 1 mile | 1.6094 kilometres | 1 sq mile | 2.59 sq kilometres |

- **Look at the chart above showing the metric equivalent for linear (length) and square measure.**

Consider the following problem:




If a room measures 8' x 6'.
How many square metres is this equivalent to?

**Answer:**

Core Skills
N:1·1

Basic Skills Standards
N:18·1

# METRIC EQUIVALENTS

## TIMBER SIZES

| | | | | | |
|---|---|---|---|---|---|
| 3/16" | = | 4mm | 5/8" | = | 15mm |
| 1/4" | = | 6mm | 3/4" | = | 18mm |
| 3/8" | = | 9mm | 1" | = | 25mm |
| 1/2" | = | 12mm | 1 1/4" | = | 30mm |
| 1.8m | = | 5'10 7/8" | 3.9m | = | 12' 9 1/2" |
| 2.1m | = | 6'10 5/8" | 4.2m | = | 13' 9 3/8" |
| 2.4m | = | 7'10 1/2" | 4.5m | = | 14' 9 1/8" |
| 2.7m | = | 8'10 1/4" | 4.8m | = | 15' 9" |
| 3.0m | = | 9'10 1/8" | 5.1m | = | 16' 8 3/4" |
| 3.3m | = | 10' 9 7/8" | 5.4m | = | 17' 8 5/8" |
| 3.6m | = | 11' 9 3/4" | 5.7m | = | 18' 8 3/4" |

**Write down the approximate equivalent sizes of the following timbers:**

1. 6" x 1" =
2. 7" x 2" =
3. 9' x 2½" =
4. 8" x 3" =
5. 7" x 1¼" =

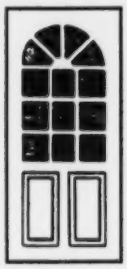
TASK SHEET
UPGRADE
CONSTRUCTION

# DOOR PRICES

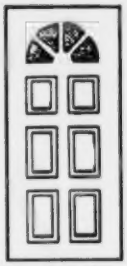
## Quality interior and exterior doors

All sizes shown are nominal. All prices subject to V.A.T.

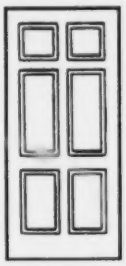
**HARDWOOD DOORS 'A' GRADE 40mm LAUAN DOWEL CONSTRUCTION & HARDWOOD DOORS 45mm LAUAN MORTICE AND TENON CONSTRUCTION**



KENTUCKY
**£49.84 (DC)**
**£104.96 (MTC)**

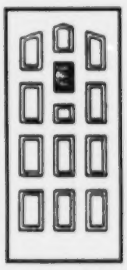


CAROLINA
**£54.52 (DC)**
**£112.64 (MTC)**



COLONIAL
**£58.48 (DC)**
**£112.56 (MTC)**

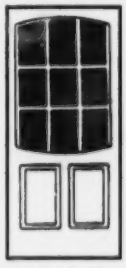
RICHMOND
**£55.19 (DC)**
**£103.92 (MTC)**



ELIZABETHAN
**£58.48 (DC)**
**£114.80 (MTC)**

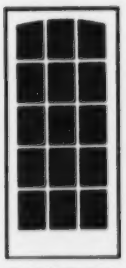
WINDSOR
**£52.11 (DC)**
**£104.96 (MTC)**

KANSAS
**£62.91 (DC)**

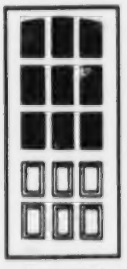


HALF BOW
**£62.50 (DC)**
**£113.20 (MTC)**

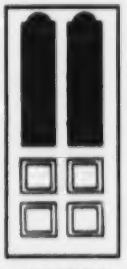
GEORGIA
**£53.18 (DC)**
**£104.96 (MTC)**



DAKOTA/SA
**£48.02 (DC)**



ALICANTE
**£55.34 (DC)**
**£111.20 (MTC)**



VICTORIA
**£56.90 (DC)**
**£109.60 (MTC)**

## Situation:

A client likes the following doors: Kentucky, Carolina, Georgia, Victoria.

Find the prices for each for both dowel construction and mortice and tenon construction.

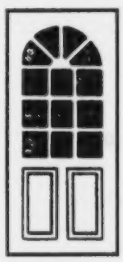
## Write them here:

- **Report to the client the differences in prices.**

Core Skills
N:1·1

TASK SHEET
UPGRADE
CONSTRUCTION

# DOOR PRICES



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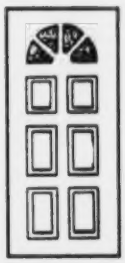

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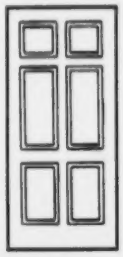
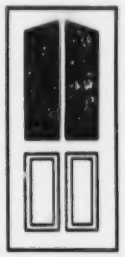
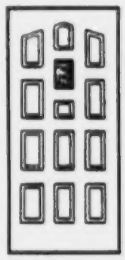


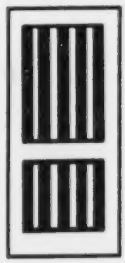
COLONIAL
**£58.48 (DC)**
**£112.56 (MTC)**



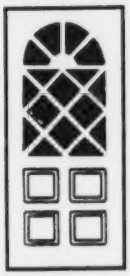
RICHMOND
**£55.19 (DC)**
**£103.92 (MTC)**



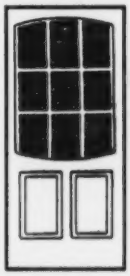
ELIZABETHAN
**£58.48 (DC)**
**£114.80 (MTC)**



WINDSOR
**£52.11 (DC)**
**£104.96 (MTC)**



KANSAS
**£62.91 (DC)**



HALF BOW
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GEORGIA
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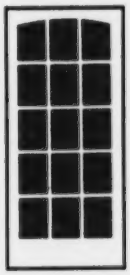
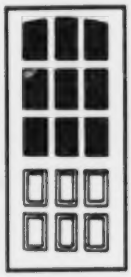


DAKOTA/SA
**£48.02 (DC)**



ALICANTE
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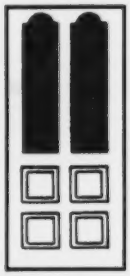

VICTORIA
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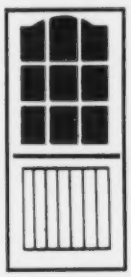
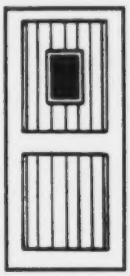
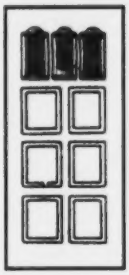


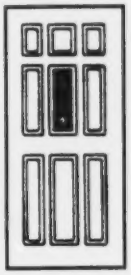
STABLE 9 LIGHT
**£62.46 (DC)**



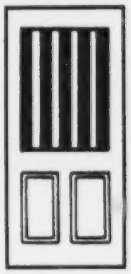
STABLE 1 LIGHT
**£69.80 (DC)**
**£112.64 (MTC)**



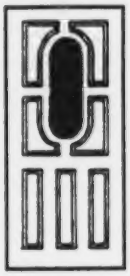
KNIGHTSBRIDGE
**£65.22 (DC)**



CADIZ
**£64.21 (DC)**



ALGARVE
**£58.56 (DC)**



ACACIA
**£77.61 (DC)**

## Study these doors:

- Find the cheapest solid wooden door with no glass panels.
- Compare the prices of the stable nine light with the stable one light. Which would you recommend bearing safety in mind.
- Work out the prices of the following doors when VAT at 17½% is added:

  Knightsbridge

  Algarve

  Dakota

# ANSWERS

## Application of Number

### 24 hour clock

| | | | |
|---|---|---|---|
| 10.45 | 6.15 pm | 18.05 | 2.45 pm |
| 12.35 | 1.05 pm | 20.29 | 8.55 pm |
| 13.50 | 10.05 pm | 22.01 | 3.02 pm |
| 15.20 | 12.07 am | 00.00 | 11.50 pm |
| 17.16 | 4.50 pm | 00.30 | 5.10 pm |

### Addition

| | | | | |
|---|---|---|---|---|
| 65 | 37 | 51 | 72 | 80 |
| 120 | 109 | 111 | 117 | 106 |

### Subtraction

| | | | | |
|---|---|---|---|---|
| 22 | 43 | 43 | 24 | 26 |
| 37 | 29 | 17 | 9 | 24 |

### Multiplication Tables

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **1** | 63 | **2** | 35 | **3** | 48 | **4** | 45 | **5** | 81 |
| **6** | 42 | **7** | 20 | **8** | 56 | **9** | 80 | **10** | 54 |

72 is 8 x 9 or 9 x 8
54 is 6 x 9 or 9 x 6
40 is 5 x 8 or 8 x 5 or 4 x 10 or 10 x 4
30 is 5 x 6 or 6 x 5 or 3 x 10 or 10 x 3

### Multiplication

| | | | | |
|---|---|---|---|---|
| 882 | 864 | 592 | 780 | 1659 |
| 45250 | 35242 | 98064 | 183654 | 69795 |

### Fun with Numbers

666 777 888 999

### Number Magic

123456789 x 9 + 10 = 1111111111
769230 x 13 = 9999990

### Division

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **1** | 12 | **2** | 27 | **3** | 22 | **4** | 39 | **5** | 33 |

### Fractions & Decimal

| | | |
|---|---|---|
| **1** | 100 | 0.5 |
| **2** | 25 | 0.25 |
| **3** | 50 | 0.666 |

# ANSWERS

## Application of Number

### Significant figures

1 a) 54.9759
b) 54.98
c) 55

2) a) 0.009468
b) 0.00946
c) 0.01

3) 32

4) 8.10

5) a) 4.1487
b) 4.149
c) 4.15

6) a) 79.398
b) 79

### How to use a calculator

| Wrong answers are: | Correct answers are: |
|---|---|
| 2. 2595.2 | 259.52 |
| 3. 18.113 | 181.13 |
| 7. 21.5 | 0.215 |
| 9 2.84 | 28.4 |
| 10. 0.33 | 3.3 |

### Using your calculator

1. 130.88
2. 49.22
3. 0.0691
4. 2.486
5. 9.85
6. 1.945
7. 0.002025

### Percentages

a) £34.15
b) £28.47
c) £1.48
d) £36.35
e) £140.57

### Percentages

1) £90.74
2) 17.04 linear metres
3) £49.30
4) £5055.12

### Practise your skills

£224 £179.20
£6.10 £155.55
28 £136.42
5 £122.50

### Calculations of covering materials

216 tiles

# ANSWERS

## Application of Number

### Areas of Triangles

1) 9m²
2) 11.76m²
3) 2.52m²
4) 40.92m²
5) 1.44m²

### Areas of Circles

1) 201.09m²
2) 452.45m²
3) 120.78m²
4) 289.57m²
5) 2534.21m²
6) 16.09m²

### Volumes

1) 36m³
2) 38.05m³
3) 51m³
4) 0.066m³

### Costing of Timber

7.41m

### Metric equivalents

4.46m²

### Metric equivalents

1) 150mm x 25mm
2) 175mm x 50mm
3) 2.7m x 62mm
4) 200mm x 75mm
5) 175mm x 30mm

### Door prices

| | |
|---|---|
| Knightsbridge | £76.63 |
| Algarve | £68.80 |
| Dakota | £56.42 |

# SELF-ASSESSMENT QUESTIONNAIRE

## Application of Number

Please tick a box.

| | | Please tick | | | |
|---|---|---|---|---|---|
| I feel confident using: | 24 hour clock | Yes | | No | |
| | addition/subtraction | Yes | | No | |
| | multiplication/division | Yes | | No | |
| | significant figures | Yes | | No | |
| | fractions and decimals | Yes | | No | |
| | calculations | Yes | | No | |
| | percentages | Yes | | No | |
| | measurement | Yes | | No | |
| | areas | Yes | | No | |
| | volume | Yes | | No | |
| | money | Yes | | No | |
| | time | Yes | | No | |
| | quantity | Yes | | No | |
| | directions (giving and following) | Yes | | No | |
| | measurement of weights | Yes | | No | |
| | charts/graphs | Yes | | No | |
| | scale drawings | Yes | | No | |
| | costing | Yes | | No | |
| | conversion tables | Yes | | No | |

I require further work on .....

.....

**If you have answered NO to any of these questions then read through the section again or ask your tutor for help.**

INFORMATION
TECHNOLOGY

FACT SHEET
UPGRADE
CONSTRUCTION

# INFORMATION TECHNOLOGY

**What is it?**

It's the input, storage, accessing and retrieving of information by the use of electronic methods.

**What's the main method?**

Computers (they process information very quickly).

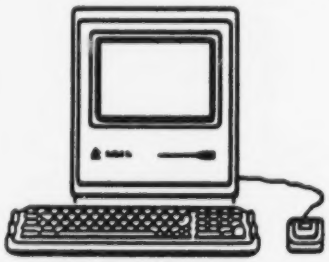
**What other method is there?**

Telecommunications – telephonic means of transmitting information between the various parts of an organisation, or from one firm to another.

**Where is it used?**

**On the shopfloor** – data collection systems can be used to link production machinery in factory workshops to a central computer, transmitting messages which allow the computer to record output.

**In warehouses** – machinery can be computer controlled and so help the packing of goods on to pallets ready for sending off to customers.



**In stock/store rooms** – there is no need now to have store rooms full of materials. With new technology materials can be supplied direct from suppliers to the factory floor on demand.

**Do you use I.T.?**

# QUESTIONNAIRE

**Find out** (ask your tutor or supervisor)

- What computers and printers are there for general use at your College or for your course or department.

- Is I.T. a part of your course of study?

- Find out exactly which computer skills you need for your course.

- Are there special times during the week when you can have access to computers? Write them here:

- Are there clear instructions for the use of computers and for the use of software?

- Are there software packages available including graphics packages available for use?

- Is there help available if you need it from tutors trained in computing skills?

| Core Skills |
| --- |
| IT:1 |
| C:1·1 |

| Basic Skills Standards |
| --- |
| C:5·2 |

FACT SHEET UPGRADE CONSTRUCTION

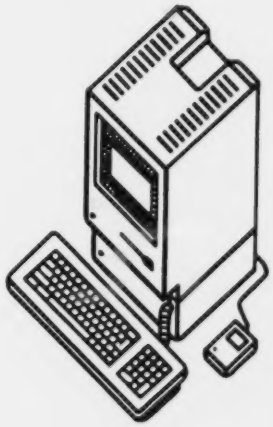
# WHERE IS I.T. USED?

I.T. is now an important part of our lives.

When do we use computers?

**Here are some examples:**

- in the library – information about books borrowed etc. is stored on computer
- at the doctor's – regular medical tests – details stored on computer
- in banks – details stored on computer
- holidays – can find out what's available where and when very quickly
- driving licence information
- car tax renewal
- stock records
- insurance records
- paying on easy terms
- poll tax payments (for the over 18's)
- gas bills
- electricity bills
- water rates
- membership subscriptions.



**In your firm:**

- computer aided design
- costing
- wages
- staffing details
- stock records
- materials.

**Any more?**

FACT SHEET
UPGRADE
CONSTRUCTION

# INFORMATION SYSTEMS WHICH TRANSMIT DATA

**How do they do it?**

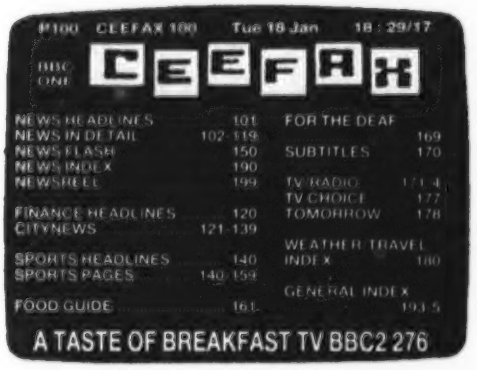
- they use television or telephone links

**Where is the information displayed?**

- on computer or television screens

**What do you know about TELETEXT?**

- Teletext displays screens of information on televison sets which have teletext equipment.
  The BBC's service is called **CEEFAX**
  The ITV's service is called **TELTEXT**

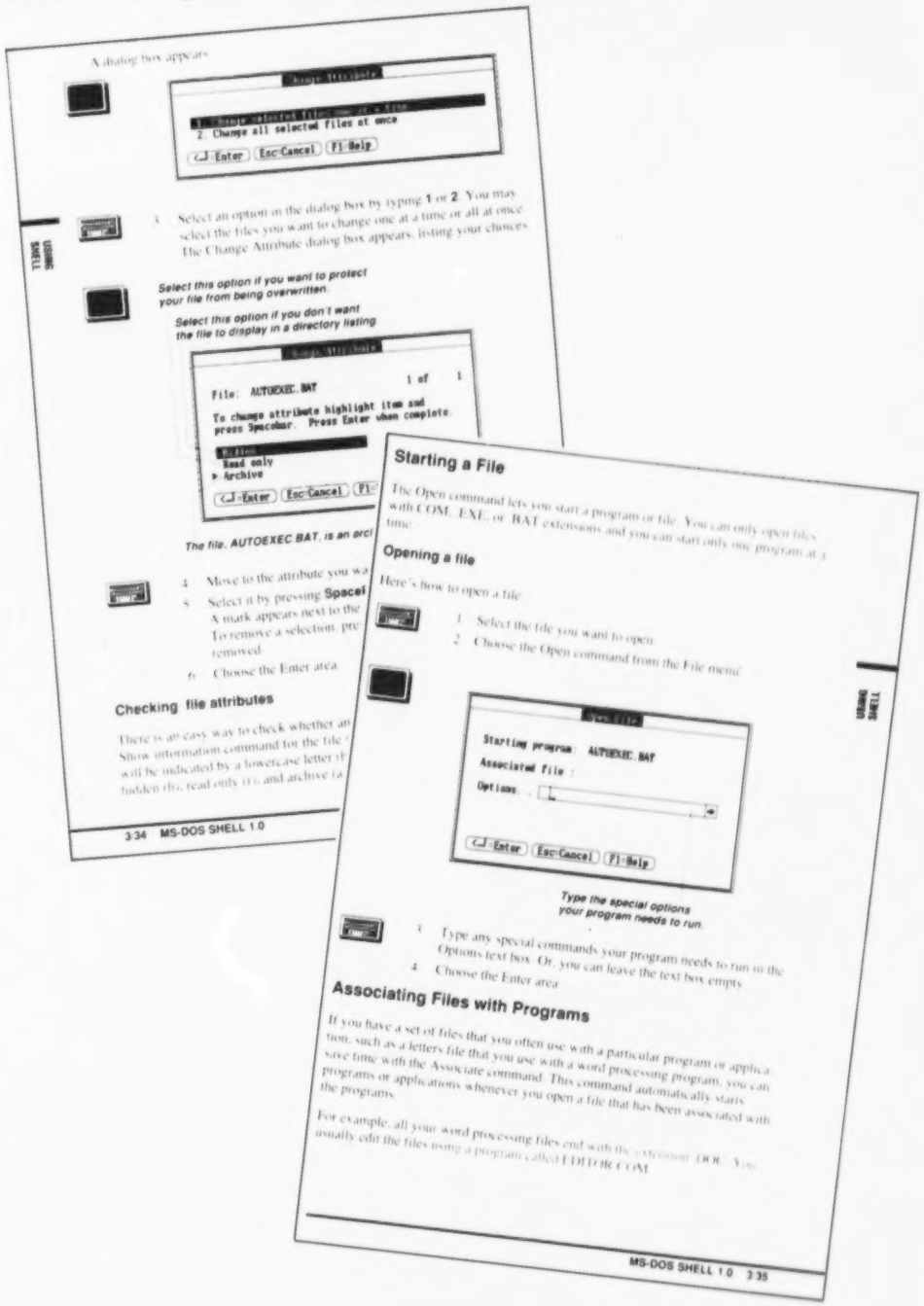



**What do you know about VIEWDATA?**

- This is a two way information system where members can connect their computer through the telephone system to the central computer. Then the subscriber can access the central store of information and use any of the services provided such as electronic mail, telebanking and teleshopping.

# USING A COMPUTER

**Before commencing the following exercises you should consult your own computer users manual to determine how to carry out the computer functions.**


A dialog box appears
1. Change selected files one at a time
2. Change all selected files at once
Enter
Esc=Cancel
F1=Help
Select an option in the dialog box by typing 1 or 2. You may select the files you want to change one at a time or all at once. The Change Attribute dialog box appears, listing your choices.
Select this option if you want to protect your file from being overwritten.
Select this option if you don't want the file to display in a directory listing.
File: AUTOEXEC.BAT
1 of 1
To change attribute highlight item and press Spacebar. Press Enter when complete.
Read only
Archive
Enter
Esc=Cancel
The file, AUTOEXEC.BAT, is an arci
4. Move to the attribute you wa
5. Select it by pressing Spacel
A mark appears next to the
To remove a selection, pre
removed.
6. Choose the Enter area
Checking file attributes
There is an easy way to check whether an
Show information command for the file
will be indicated by a lowercase letter (h
hidden (h), read only (r), and archive (a
3.34 MS-DOS SHELL 1.0
Starting a File
The Open command lets you start a program or file. You can only open files with COM, EXE, or BAT extensions and you can start only one program at a time.
Opening a file
Here's how to open a file:
1. Select the file you want to open.
2. Choose the Open command from the File menu.
Starting program: AUTOEXEC.BAT
Associated file:
Options:
Enter
Esc=Cancel
F1=Help
Type the special options your program needs to run.
3. Type any special commands your program needs to run in the Options text box. Or, you can leave the text box empty.
4. Choose the Enter area.
Associating Files with Programs
If you have a set of files that you often use with a particular program or application, such as a letters file that you use with a word processing program, you can save time with the Associate command. This command automatically starts programs or applications whenever you open a file that has been associated with the programs.
For example, all your word processing files end with the extension .DOC. You usually edit the files using a program called EDITOR.COM.
MS-DOS SHELL 1.0 3.35
USING SHELL



BEST COPY AVAILABLE

FACT SHEET UPGRADE CONSTRUCTION

# HOW TO START UP AND CLOSE DOWN A COMPUTER

## Instructions

- Set the computer going **following the correct order of instructions** (or else the system will not operate).
- **Load the program** you wish to use.
- When you have done your work, **save it**. Then you can **load that data** back into the system and work on it at a later date.
- **Remember** – before closing down the system **make sure** that you have **saved** your material.

Remember to **leave** the **program** in the **correct way.**

**Close down** the **system** in the **order described.**

- Follow the instructions necessary to open up the system
- Load the program and data
- Close down the system

**Remember to follow all instructions carefully**

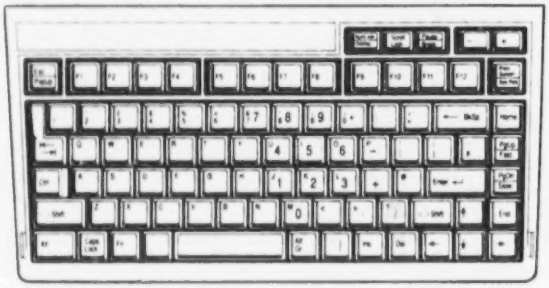
Core Skills
IT:1·1

FACT SHEET UPGRADE CONSTRUCTION

# USE THE KEYBOARD TO ENTER DATA

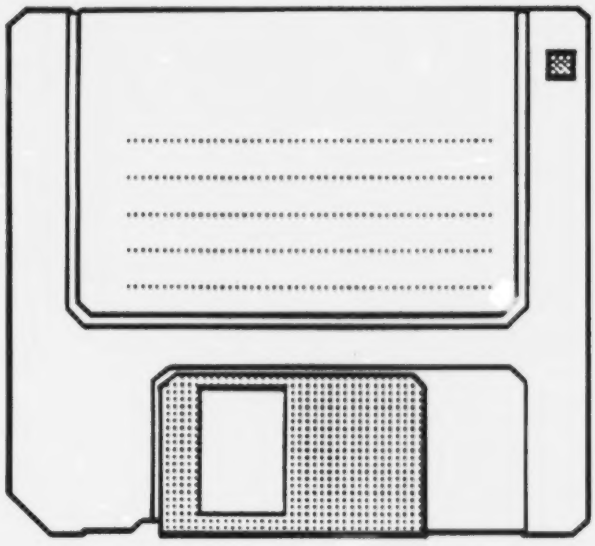
When wanting to **process information** using a computer system you must first enter this information into the computer.

## How do you do it?

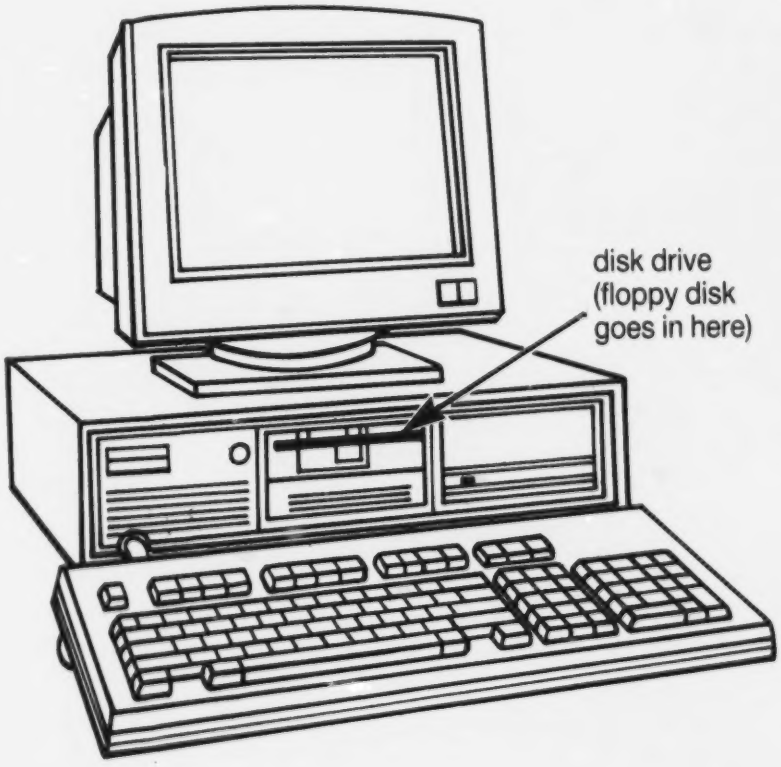
| | |
|---|---|
| **Keyboard** | The **keyboard** is the most common way of inputting information. Most computer keyboards have the same layout as typewriters but with additional keys such as **shift lock**, **caps lock**, **control** and other special **function keys** – their function depends on the program being used.  |
| **Space bar** | gives a blank space |
| **Cursor control keys** | move the cursor around the screen |
| **Delete key** | rubs out anything you don't want |
| **Escape key** | press this to stop a program |
| **Return key** | sends your message to the computer |
| **Programmable or function keys** | allow you to do special things |
| **Shift keys** | some keys have 2 things written on them (like the number keys). Press the number key and you will get a number. Press the **shift** and the number key and you will get the character at the top. |
| **Mouse** | The **mouse** allows the user to move the cursor more quickly than by using the keys. (The cursor is a little marker that moves across the screen and shows you where the next letter will be placed.) |

# FLOPPY DISK

**What is a floppy disk?**



• A floppy disk is an individual disk of 3½"or 5¼" diameter which is used to store data.



TASK SHEET UPGRADE CONSTRUCTION

# ENTER, LOAD & SAVE TEXT

For this task you will need to know how to:

- **open up your computer**
- **load your word processing program**
- **enter text**
- **save text on floppy disk under the file name of your choice**
- **use a keyboard**

Load your word processing program.

Key in the information given below.

## Job instructions

Client, Mr J Harris, requires replacement door, design Carolina price £165.00, to be fitted on Tuesday 21 July at 11.30 am

Save your file.

Close down the computer.

TASK SHEET
UPGRADE
CONSTRUCTION

# DELETE/REPLACE WORDS

For this task you will need to know how to:

- **open up the computer**
- **access the word processing program**
- **retrieve previously saved file from floppy disk**
- **delete words**
- **replace words**
- **save amended version under same file name**
- **close down computer.**

Load your word processing program.

Replace words previously keyed in with the new information given below:

Your client, Mr J Harris, has changed his mind. He now requires a door, style **Georgia** price **£159,** to be fitted on the same day but at a later time of **1.15 pm.**

Delete the necessary words and replace them with this new information.

Save your file.

Close down the computer.

TASK SHEET UPGRADE CONSTRUCTION

# DELETION EXERCISE

Key this passage into the computer.

Delete the words which you think are wrong.

## SAFETY AT WORK

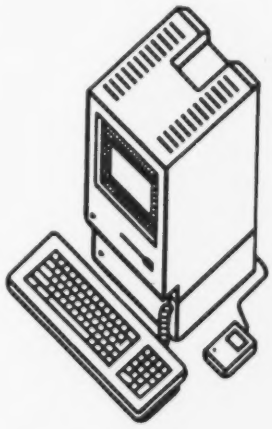
Safety at work is an **important/immense/impossible** matter. Failure to pay proper attention to safe procedures and rules can result in serious accidents. Many accidents have common causes, however, and can be easily prevented,provided we learn to work safely.

Using the proper **practical/protective/prepared** equipment is important. If such equipment as overalls, helmets, boots, dust masks, etc. are provided they must be used.

When moving about your place of work you should **observe/reserve/preserve** the rules: walk, don't run and don't take short cuts. Don't drive a works vehicle without **permission/operation/allowance/** and never hitch a ride. It's also important not to have things lying around which people can **walk/fall/lean** over.

Lifting and carrying are a common **case/cause/course** of accidents. You should not lift or carry more than you can manage and you should ask for **permission/assistance/offers** with anything you cannot manage by yourself.

- Save your file



| Core Skills |
| --- |
| IT:1·1 |
| IT:1·2 |

FACT SHEET UPGRADE CONSTRUCTION

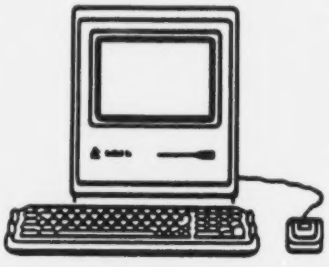
# WORD PROCESSING

## What is it?

Any computer can become a word processor by loading a word processing package into it. It's like an electronic typewriter.

## What are the advantages?

- you can **type** in text
- you can **alter it** whenever you like
- you can **correct** mistakes (some have a spell check)
- you can **move** text **around**
- you can **add** to it, or **delete** words or paragraphs
- you can **lay it out** as you like it
- you **don't have** to **finish** something in one go – there's no hurry
- you can **save it**
- you can **print it** whenever you like
- it gives you thinking time – you can **add** or **alter** at a **later date**.



TASK SHEET UPGRADE CONSTRUCTION

# PRESENTATION OF MATERIALS

## What can you do to present materials attractively?

- **Spacing** — spacing between lines can be altered, extra spacing can be added between chunks of text so that the appearance of a document can be improved.

- **Typeface** — there are many different varieties to choose from:

| | |
|---|---|
| Timber | Athens |
| Timber | Bookman |
| Timber | Helvetica |
| Timber | London |
| Timber | Times |
| Timber | Palatino |

- **Size of letters**

| | |
|---|---|
| Timber | 9 point |
| Timber | 12 point |
| Timber | 14 point |
| Timber | 18 point |

- **Style**

| | |
|---|---|
| **Timber** | Bold |
| *Timber* | Italic |
| Timber | Underline |
| Timber | Outline |

- **Justify**

Timber (justified left)

Timber (centred)

Timber (justified right)

- Produce a safety poster carrying this message:

  **Only drive works vehicles you have been trained to operate and are allowed to use!**

- Use any of the techniques listed above

| Core Skills |
|---|
| IT:1·1 |
| IT:1·3 |

FACT SHEET UPGRADE CONSTRUCTION

# FAX MACHINE

**What is it?**

- Fax is a shortened form of facsimile which means exact copy.

**What does it do?**

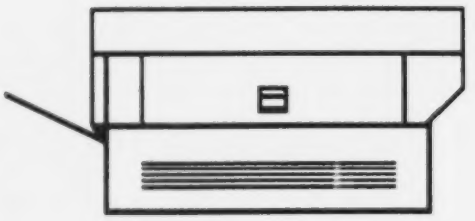
- It transmits a copy of a document to a receiver.

**How does it do it?**

- By using either the telephone or telex network to transmit.

**What are the advantages of this form of communication?**

- It is quick – it can take a few minutes to send a document instead of a few days by normal post.



**Here are the instructions:**

- Place the sheet to be faxed on the feeder tray.
- Tap in the fax number of the person or firm you wish to send the material to.
- The material will feed through automatically once contact is made.
- A print-out will be given to you to show that the material has been received.

TASK SHEET
UPGRADE
CONSTRUCTION

# FAX MACHINES

**Situation:**
There are 3 of you, all joiners, working on an extension to a detached house belonging to Mr Saville of 2 Dendy Road, Dibden, Nr Southampton, Hants.

Your firm's Head Office in Birmingham and your supervisor (Jim Williams) has instructed you to fax in to the office the details of the hours worked by each joiner.

**In order to carry out this task you will need to:**

- open up the computer
- type in the required information

To: Mr J Williams, Buildright, Birmingham

| | | |
|---|---|---|
| John Smith | ... | 42 hours |
| Bill Dawson | ... | 37 hours |
| Fred Brown | ... | 40 hours |

Site: 2 Denby Road, Dibden, Southampton

- output hard copy
- follow instructions for faxing
- successfully transmit a copy to your supervisor.



| Core Skills |
|---|
| IT:1·1 |
| IT:1·3 |

# GLOSSARY OF COMPUTER TERMS

| | |
|---|---|
| **Command** | a message that tells a computer to do something. |
| **Cursor** | a blinking line or box on a computer screen that marks where things you type in will go. |
| **Drive** | a device that moves information between disk and the computer's memory. |
| **Filename** | the unique name given to a program or a particular file. |
| **Function keys** | specific keys on the keyboard that, when pressed, instruct the computer to perform a particular task. |
| **Hard Copy** | a printed copy of computer output such as letters, reports, charts, graphs. |
| **Input** | the process of entering data into a computer, or the actual data being entered. |
| **Memory** | the area in the computer where information is held, while the computer is using it. |
| **Menu** | a list of choices from which you can select a task or operation to be performed by the computer. |
| **Output** | computer results or data that has been processed. |
| **Program** | a series of instructions a computer can understand which makes it do something. |
| **Prompt** | a character or series of characters that appear on the screen to ask for input from the user. |
| **Save** | to store information on a disk to be used later. |

# SELF-ASSESSMENT QUESTIONNAIRE

## Information Technology

Please tick a box.

| | | | | |
|---|---|---|---|---|
| I know what I.T. is | Yes | | No | |
| I know where it is used and its benefits | Yes | | No | |
| I know how to start up and close down a computer | Yes | | No | |
| I know how to use the keyboard to enter data | Yes | | No | |
| I know how to enter, load and save text | Yes | | No | |
| I know how to delete words | Yes | | No | |
| I know how to use a printer | Yes | | No | |
| I know about word processing | Yes | | No | |
| I know how to present material effectively | Yes | | No | |
| I can use a fax machine | Yes | | No | |
| I know about computer networking | Yes | | No | |
| I am familiar with computer terms | Yes | | No | |

I need further work on

**If you have answered NO to any of these questions then read through this section again or ask your tutor for help.**

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